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TRANSACTIONS

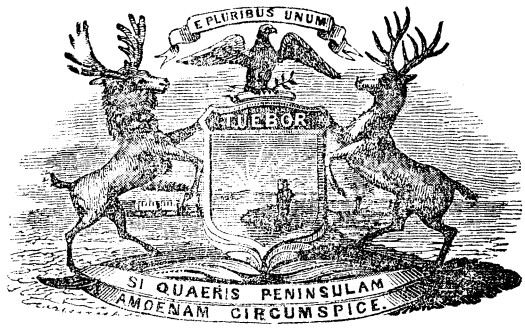
OF THE

STATE AGRICULTURAL SOCIETY:

WITH REPORTS OF

COUNTY AGRICULTURAL SOCIETIES,

FOR 1853.



PUBLISHED BY ORDER OF THE LEGISLATURE.

VOL. V.

J. C. HOLMES,

SECRETARY OF THE MICHIGAN STATE AGRICULTURAL SOCIETY.

LANSING:
G. W. PECK, PRINTER TO THE STATE.

1854.

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OFFICERS FOR 1854.

PRESIDENT:

GEORGE C. MUNRO, Jonesville.

EXECUTIVE COMMITTEE:

JAY R. MONROE, Paw Paw.
SAMUEL M. BARTLETT, Lasalle.
JOHN STARKWEATHER, Ypsilanti.
C. W. GREENE, Farmington.
G. V. N. LOTHROP, Detroit.
JOHN MILLER, Adrian.
A. Y. MOORE, Schoolcraft.
PAYNE K. LEACH, Utica.
CHARLES DICKEY, Marshall.
THOMAS CLARK, Lapeer.

TREASURER:

H. H. BROWN, Detroit.

SECRETARY:

J. C. HOLMES, Detroit.

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ANNUAL REPORT

OF THE

MICHIGAN STATE AGRICULTURAL SOCIETY FOR 1853.

OFFICE OF THE MICHIGAN STATE AGRICULTURAL SOCIETY,
Detroit, June 20th, 1854.

To the Secretary of State:

SIR—In accordance with an act of the Legislature, approved April 7th, 1851, I have the honor herewith to transmit to you the Fifth Annual Report of the Michigan State Agricultural Society.

In presenting the report of the Michigan State Agricultural Society, for the year 1853, allow me to say that the Society has for its object the dissemination of knowledge, and the advancement of our agricultural interests, and of every branch of business that will add to the general prosperity of the State; and that its influence is extensively felt and acknowledged.

At no previous date in her history has Michigan been so prosperous, or her prospects so fair, for speedily becoming one of the first States in the Union, as the present. Her natural resources for farming, lumbering and mining, are not excelled by any other State.

Our population is rapidly increasing with an intelligent and energetic class of people, who appreciate the value of our soil and climate for farming purposes; our Pine, Cherry, Oak, Blackwalnut, White Wood, and other timber, for lumbering; our mineral wealth, in Copper, Iron

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and Coal; with our facilities for getting out, and transporting these to any desirable market.

It has been my endeavor to collect and condense into as narrow limits as possible, and present in the following pages, such information respecting our resources as the people are seeking for, and the Constitution of the Society makes it incumbent upon me to give. Yet, I am fully aware that I have fallen far short of giving a full statement especting the salubrity of our climate, the natural fertility of our soil, our rich mineral deposits or our means of transportation by water, as well as by rail, plank, and other roads.

The Agricultural Society has had a happy influence upon the agricultural interests of the State. It has given an impetus to a worthy desire among farmers, to excel in the cultivation of the soil and the raising of stock. There are now in this State many superior specimens of improved breeds of horses, neat cattle, sheep, swine and poultry. Indeed, Michigan is becoming proverbial for her fine stock, as well as for her wheat and other crops. Michigan is a peninsula of latent wealth, cropping out and inviting men to come and assist in developing it.

We have a profusion of iron, copper, silver, coal, lime, plaster, salt and timber; a healthy climate, pure water and a generous soil. We think we possess much that is inviting to the industrious, and but little that can be repulsive to any but the indolent and vicious. Activity, energy, and good will are the order of the day in Michigan; consequently, neither indolence or vice can flourish here.

With these remarks I refer you to the following pages:

Very respectfully,

J. C. HOLMES,

Sec'y Mich. State Ag'l Society.

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LEGISLATIVE ENACTMENTS.

AN ACT making an appropriation to aid the Michigan State Agricultural Society, and to provide for publishing the Annual Reports of said Society.

SECTION 1. *The People of the State of Michigan enact*, That there be and is hereby appropriated out of the Treasury of this State, the sum of one thousand dollars, each year, for the years eighteen hundred and fifty-three and eighteen hundred and fifty-four, to the Michigan State Agricultural Society, for the payment of premiums; to be paid by the State Treasurer to the Treasurer of said Society, on the warrant of the Auditor General: *Provided*, That the Treasurer of said Society shall, on or before the fifteenth day of October in each year, make, subscribe, and deposit with the Auditor General, his affidavit that said Society has raised for the year a like sum of one thousand dollars, by voluntary subscriptions and fees of membership.

SECTION 2. That two thousand copies of the Annual Report of the Michigan State Agricultural Society be printed and bound annually under the supervision of the Secretary of State, in the same manner and form as the report of the Superintendent of Public Instruction for the year eighteen hundred and fifty-two; and when so completed, the Secretary of State shall reserve thirty copies for the use of the State Library, and shall deposit with the Auditor General, one copy for each organized township in this State, to be sent by him to each township for the use of the library thereof, and the remaining copies shall be for-

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warded by the Secretary of State to the Secretary of the Michigan State Agricultural Society, for the use of said Society, under the control of the executive committee.

Approved February 14, 1853.

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NAMES OF THE OFFICERS

OF THE

MICHIGAN STATE AGRICULTURAL SOCIETY FOR 1853.

President—JOSEPH R. WILLIAMS, Constantine, St. Joseph Co.

Treasurer—H. H. BROWN, Detroit, Wayne county.

Secretary—J. C. HOLMES, " " "

EXECUTIVE COMMITTEE.

Names.	*Post Office.*	*County.*
George C. Munro,	Jonesville,	Hillsdale.
M. Shoemaker,	Jackson,	Jackson.
Titus Dort,	Dearborn,	Wayne.
Jay R. Monroe,	Paw Paw,	Van Buren.
A. Y. Moore,	Schoolcraft,	Kalamazoo.
Thomas Clark,	Lapeer,	Lapeer.
C. W. Green,	Farmington,	Oakland.
F. V. Smith,	Coldwater,	Branch.
Ira H. Butterfield,	Utica,	Macomb.
Wm. Finley,	Ann Arbor,	Washtenaw.

VICE PRESIDENTS.

Names.	*Post Office.*	*County.*
John R. Kellogg,	Allegan,	Allegan.
John Bowne,	Hickory Corners,	Barry.

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Names.	*Post Office.*	*County.*
E. H. Crippen,	Coldwater,	Branch.
A. McMath,	Niles,	Berrien.
L. Maynard,	Marengo,	Calhoun.
George Redfield,	Adamsville,	Cass.
Samuel Ashman,	Saut St. Mary,	Chippewa.
David Sturgis,	De Witt,	Clinton.
Reuben Fitzgerald,	Bellevue,	Eaton.
L. W. Beecher,	Genesee,	Genesee.
Benj. Fowle,	Moscow,	Hillsdale.
Cyrus Lovell,	Ionia,	Ionia.
Minos McRoberts,	Mason,	Ingham.
Ed. Delamater,	Brooklyn,	Jackson.
David B. Webster,	Kalamazoo,	Kalamazoo.
Rix Robinson,	Ada,	Kent.
Robt. Ferguson,	Dryden,	Lapeer.
Walter Wright,	Adrian,	Lenawee.
N. G. Isbell,	Howell,	Livingston.
Michael Dousman,	Mackinaw,	Mackinaw.
J. Summers,	Utica,	Macomb.
W. H. Montgomery,	Monroe,	Monroe.
A. Terry,	Rochester,	Oakland.
Henry Pennoyer,	Grand Haven,	Ottawa.
H. S. Miller,	Saginaw,	Saginaw.
John Baird,	Port Huron,	St. Clair.
E. S. Moore,	Three Rivers,	St. Joseph.
L. B. Martin,	Shiawassee,	Shiawassee.
Orrin White,	Ann Arbor,	Washtenaw.
Bela Hubbard,	Detroit,	Wayne.
Dolphin Morris,	Decatur.	Van Buren.

CORRESPONDING SECRETARIES.

Names.	*Post Office.*	*County.*
Elisha Ely,	Allegan,	Allegan.
N. Barlow, Jr.,	Hastings,	Barry.
Wm. Dougherty,	Berrien Springs,	Berrien.
E. B. Pond,	Coldwater,	Branch.

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Names.	*Post Office.*	*County.*
Charles Dickey,	Marshall,	Calhoun.
Justus Gage,	Dowagiac,	Cass.
S. McKnight,	Saut St. Mary,	Chippewa.
J. F. Turner,	De Witt,	Clinton.
W. R. Martin,	Vermontville,	Eaton.
Geo. M. Dewey,	Flint,	Genesee.
Isaiah McCollum,	Hillsdale,	Hillsdale.
C. P. Bush,	Lansing,	Ingham.
Frederick Hall,	Ionia,	Ionia.
J. C. Watkins,	Grass Lake,	Jackson.
F. W. Curtenius,	Kalamazoo,	Kalamazoo.
Henry Seymour,	Grand Rapids,	Kent.
Geo. Clark, Jr.,	Lapeer,	Lapeer.
Wm. H. Scott,	Adrian,	Lenawee.
W. A. Buckley,	Howell,	Livingston.
Chas. G. Avery,	Mackinaw,	Mackinaw.
Payne K. Leech,	Utica,	Macomb.
E. G. Morton,	Monroe,	Monroe.
A. C. Walker,	Farmington,	Oakland.
Thos. J. White,	Grand Haven,	Ottawa.
W. L. P. Little,	Saginaw,	Saginaw.
Charles A. Loomis,	St. Clair,	St. Clair.
M. Wakeman,	Colon,	St. Joseph.
James Cummins,	Corunna,	Shiawassee.
W. H. Harrison,	Paw Paw,	Van Buren.
J. Starkweather,	Ypsilanti,	Washtenaw.
Abram Fisher,	Redford,	Wayne.

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EXECUTIVE MEETING.

The Executive Committee held its Annual Meeting at the Biddle House in Detroit, on Tuesday, December 14th, 1852, at 12 o'clock M.

The meeting being called to order, the President, Jos. R. Williams, in the chair.

The following members answered to their names:

Geo. C. Munro, Ira H. Butterfield, Titus Dort, F. V. Smith, J. R. Munro, M. Shoemaker, C. W. Green, Thos. Clark, Andrew Y. Moore.

The Washtenaw County Agricultural Society was represented by John Starkweather, of Ypsilanti.

The Macomb County Agricultural Society was represented by Payne K. Leech, of Utica.

On motion of Titus Dort,

Resolved, That the Committee adjourn to 2 o'clock, P. M.

—

Two o'clock P. M.; Committee called to order.

President in the Chair.

The Secretary read the following report:

To the Executive Committee of the Michigan State Agricultural Society:

GENTLEMEN:—I am happy to meet you here at this, the 5th annual meeting of this Committee, and it is with much pleasure that I can say, that the efforts put forth by our Society, during the four years it has existed, to excite a laudable emulation, not only among our farming com-

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munity, but in every branch of industrial pursuits within our borders, have been crowned with an unexpected success. In proof of this, we have but to look around, and mark the change that has already taken place, and is still going on in the minds of the people respecting the improvement of stock, implements and machinery of all kinds. Implements and machinery that a few years since were considered the height of perfection, are now being laid aside to make way for articles, introduced to us at our exhibitions, and pronounced by our committees to be superior to all heretofore in use. Each year shows an improvement in our stock, and an increased and still increasing interest in the welfare of our Society. Many who could not be persuaded to attend our fairs until the one that has just past, came to me upon the ground, to tender, through me, to the Society, their congratulations for the good this Society had accomplished; stating, that so long as they were spared to contribute to its success, they would not be found in the back ground.

There are some who try to make themselves believe that, notwithstanding their stock or articles may be of the highest order, if they exhibit, they will not receive a premium, because they say the judges have their favorites, and award the premiums beforehand. In illustration of this idea, as well as contradiction of it, I will state a circumstance that occurred this fall. A farmer in Oakland county has a fine herd of cattle; one of his neighbors, who also has some of the best stock in that county, asked him to take some of his cattle to the fair for exhibition. His reply was, that if his cattle should be exhibited there, and proved to be the best in their class, no premium would be awarded to them, for the judges have their favorites, to whom they always give the premiums. The man who was unwilling to exhibit his cattle I will designate as Mr. N., his neighbor as Mr. G. Mr. G., after spending much time in fruitless endeavors to satisfy his friend that he was in error, offered to take some of his cattle and exhibit them with his own; to this Mr. N. consented. The cattle belonging to Mr. N. and Mr. G. were driven on to the ground and entered by Mr. G. Mr. G. first entered his own, then those belonging to N., which he also entered in his own name, as agent for Mr. N. The premiums as you are aware, are awarded to the articles or animals by the numbers, the committees not always having the names of the owners; several premiums were awarded to the cattle entered by Mr. G., and all of them published in the daily papers as being awarded

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o Mr. N. Mr. G. wrote me a note, calling my attention to this matter by saying he entered the stock as agent for Mr. N. Upon referring to my book I found this to be the case; several entries being made by Mr. G. with a note at the bottom saying, "as agent for Mr. N." I then made the correction in the Michigan Farmer, giving all the premiums to Mr. G. as agent for Mr. N. I soon found this was all wrong, and the truth of the matter was as stated above. Part of the premiums belonged to N. and part to G., but the informality in the entry had caused the error, and our friend N. had not only been awarded premiums upon his own stock, but his neighbors also, which circumstance, I presume, persuaded him that a premium could be awarded to him, although he was not in the confidence of the committee.

I mention these things to show some of the prejudices that have, and do still exist, against the Society, by here and there an individual, and in what manner they are being broken up.

Although you have accomplished much, you have barely entered upon your work; the more we do, the more we find there is to do.

The want of funds has, in a measure, retarded our progress. The funds we have had at our disposal have been judiciously expended; yet, could we have had more at our command, we could have operated in a manner that would have proved vastly more beneficial than anything we have yet accomplished.

It has been my wish to procure a suitable room for the accommodation of the Secretary, where he may establish an Agricultural Reading Boom, Library and Museum, for the benefit of the members of the Society. I think the publishers of agricultural papers would be willing to forward us their papers without charge, if we had a reading room where they could be spread out for members of the Society to read at their leisure. With the Reading Room I would connect a Library, not for circulation, for, at present I think that would be impracticable; but for reference. In connection with the Reading Room and Library, I would establish an Agricultural Museum, for the deposit of farm implements and models of machinery; beginning with the most ancient, and coming down to the most approved of the present day. I would place, side by side, the sickle and reaper, then the reaper with the addition of the raker. The scythe and mowing machine; plows, from the wooden, to the best of the present day. Thus showing at a

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glance, the progress made in the construction of implements and machinery from generation to generation.

I would make a collection of samples of grain, wool, insects, and whatever would be interesting and beneficial to the members of our Society; be they husbandmen, mechanics, manufacturers, or of any other occupation. All would find something within our walls to instruct and interest them.

I have already made a beginning in this matter; but for the want of funds and a convenient room, could not proceed.

By a donation in books from our State Legislature; the occasional purchase of a book; exchange of Transactions with other Societies, &c., we have a small collection of books, which forms but a starting point for such a library as we ought to possess.

The establishment of an Agricultural College and experimental farm, has already occupied your attention. You have petitioned the State Legislature to establish, or to aid you in establishing such an institution. Your petitions have been heard, and some action had respecting them.

Your first petition may be found in the Transactions of the Society, vol. 2, page 12. The second in the same vol., page 23. Respecting this institution, I have received two letters, one from Mr. Shearman, the Superintendent of Public Instruction, the other from Dr. Tappan, the Chancellor of the University of Michigan.

The following is the letter from Mr. Shearman:

STATE OF MICHIGAN,
OFFICE OF SUP'T OF PUBLIC INSTRUCTION,
September 21, 1852.

J. C. HOLMES, Esq., *Secretary of the Michigan State Agricultural Society:*

DEAR SIR—Herewith I send you a circular notice, relating to the dedication of the State Normal School at Ypsilanti, on the 5th day of October next. My object in calling your attention to the subject at this time, is the provision made in the law establishing this institution, for instruction in the *Mechanic Arts, the Arts of Husbandry*, and in *Agricultural Chemistry*. These are objects identical with the interests of the Society, of which you are Secretary, and in which you have taken so deep and laudable concern.

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I forward you for the purpose of convenient reference, a copy of document No. 6, relating to public instruction. On page 488 you will find the act of the Legislature relative to the establishment of the Normal School; in section 7 of which it is provided that "the Board of Education shall have power, and it shall be their duty, from time to time, &c., to provide *suitable grounds and buildings, implements of husbandry and mechanical tools*, for the purpose of more effectually carrying out the second provision of the act, which provides for instruction in these subjects.

Repeated attempts, you are aware, have been made in our State, to procure more satisfactory legislative action in relation to agriculture, but without success. The memorials of the State Agricultural Society in relation to the establishment of *an Agricultural Branch of the University*, you will find on page 205 of the document referred to; and on page 206 another memorial to the Legislature, praying for the establishment of an Agricultural College. The objects and purposes contemplated in this memorial, if successfully carried out, would seem to fill the whole field required by the interests of agriculture, and by the provisions of law, making it the duty of the Board of Education to provide for instruction in these branches, and to furnish materials, &c., for the purpose of reducing such instruction to practice. It was proposed to attach an institution to be designated the "State Agricultural College"—a farm, upon which "the culture of all the useful grains, grasses and roots, the raising of stock, &c., could be conducted to the best advantage; and where the operations of draining, and the treatment of different soils could be thoroughly exhibited—a farm—which, under the superintendence of practical and scientific masters, should become a model for the farmers of our State. The studies proposed in the memorial were those which should, and will probably be adopted at the Normal School, viz: "those of a practical kind, including Beade's Agriculture, in its details, Mathematics, the keeping of accounts, Mechanics, Natural Philosophy, and the Natural Sciences, in their application to Agriculture; and added to these, the study of Anatomy, so far as connected with the diseases of animals, the study of insects, and their habits, and to some extent Engineering, Architecture, and Landscape Gardening."

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It is respectfully suggested for the consideration of the State Agricultural Society, whether through its efficient and active co-operation with the Board of Education, in carrying into effect the provision of law which requires instruction in the mechanic arts, the arts of husbandry and agricultural chemistry, something more useful and effective may not be accomplished than has heretofore been done practically, in our State. This provision of the law has strongly attracted the favorable attention and consideration of the Board. A concentration of the means afforded by the State for the advancement of agriculture must be considered an object of importance, at all events, for years to come. The State Normal School has been permanently endowed with twenty five sections of Salt Spring Lands, which will yield sufficient revenue in time, to carry out all the purposes designed in its establishment. The class of young men who are to be expected as pupils in the institution, will be those who have been for the most part, engaged in the pursuit of agriculture, and who will in most cases, after securing that kind of education, which will be afforded in it, return to that pursuit, within the borders of our own State.

The great interests of education and agriculture therefore, can be there most *practically identified* and cherished. These views are thrown out, sir, as suggestions, which it is hoped may lead to some more important action in the future, should it be deemed a matter of importance to the agricultural interest of the State, in connection with one of its most practical educational institutions.

I have the honor to be sir,

Very respectfully, your ob't servant,

FRANCIS W. SHEARMAN,

Sup't Pub. Inst., and Sec'y Ex-officio of Board of Education.

"An act to establish a State Normal School," may be found on page 157 of the Session Laws of 1849.

"An act to consolidate and amend the laws relative to the establishment of a State Normal School," may be found on page 123 of Session Laws of 1850.

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The following is the letter from Doct. Tappan:

MICHIGAN UNIVERSITY, Dec., 1852.

J. C. HOLMES, Esq., *Secretary of the Michigan State Agricultural Society:*

DEAR SIR—Knowing full well that every thing connected with the progress of agricultural science must prove interesting both to yourself individually, and to the Society of which you are a member, I take this opportunity of laying before you some measures which have been adopted by the Regents and Faculty of the University in relation to the establishment of an Agricultural School.

You are aware that the Legislature are empowered by the new Constitution to appropriate twenty two sections of the Salt Spring Lands for the maintenance of an Agricultural School, and that they "may make the same a branch of the University, for instruction in agriculture and the natural sciences connected therewith, and place the same under the supervision of the Regents of the University." In anticipation of this legislative grant, we have accordingly organized an Agricultural School as a part of the scientific course recently adopted by the Faculty and Regents.

The following subjects are embraced in the agricultural course:

1st. Daily lectures on Chemistry, (elementary and experimental,) Chemistry applied to the arts, meteorology and climate.

2d. Geology and Mineralogy, and the application of the same to mining, drainage, construction of public works, &c., &c., illustrated by specimens from Michigan, the neighboring States, and foreign lands; also models and drawings.

3d. Animal and Vegetable Anatomy and Physiolgy in general, the physiology and diseases of domestic animals in particular, and the structure and habits of insects in reference to grain, trees and horticultural plants.

4th. Organic Chemistry and the theory and practice of agriculture, the origin and nature of soils, the different varieties of manure, tillage, tools, &c., &c.

Lectures on these subjects will be given during the next Spring and Summer term, commencing May 1st, and ending June 30th.

I am very respectfully and truly yours,

HENRY P. TAPPAN.

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The tenor of this section of the Constitution, these laws, and these letters, appear to call upon you to take another step in this matter, by appointing a committee from your own body to confer with the Board of Education, and the Regents of the University, respecting an Agricultural Department of the Normal School or the State University, in order that the provisions of the constitution and of these laws may be carried into effect as speedily as possible. Then Michigan may boast of having established the first State Agricultural School and Experimental Farm, in the Union.

While Massachusetts, New York, and other States are talking, and considering and reconsidering, and accomplishing nothing in this regard, let us act, for the agriculturists of Michigan feel a deep interest respecting the school we seek to establish, and they very naturally ask you to act, and act at once.

I also present for your consideration, a petition with accompanying documents, from Mr. E. C. Roberts, of Plymouth, respecting the potato rot.

Our rules and regulations for conducting our annual exhibitions, also our premium list, will need a careful revision. Some of the classes should be extended, and perhaps some new ones added. Much complaint has been made respecting the premiums for Sheep. You have a list for Merino; but we have on exhibition at our fairs, specimens of French Merino, Spanish Merino, and a cross of Spanish and French Merino. All of these are Merino sheep, yet three distinct classes, or varieties—each claiming the superiority over the others in quantity and quality of wool, in constitution, and quality and quantity of mutton. At the same time, the breeders of each of these classes ask for a separate list of premiums for each.

The Leather Manufacturers ask you to add a list of premiums for their benefit. This branch of business has become one of great importance to our State, and should receive your special attention. The same may be said of other branches of Manufactures—steam engines, household furniture, drain tile, &c.—all connected with the prosperity of our State.

Many questions arise in the minds of exhibitors respecting animals of pure blood. Breeders of stock understand the term "pure blood," to mean an animal of but one blood, as pure Devon, without mixture of Durham, Ayrshire, or any other blood whatever; but some exhibitors

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insist upon exhibiting their animals as pure blood, when crossed, say Devon with Durham, and so on. We also say pure Merino sheep. Here we are at a loss, for we have the pure French, pure Spanish, and a cross of the two; all pure Merino, yet differing widely in appearance. In the cross there is none but pure Merino blood, but it is neither pure French, or Spanish. Many questions of this nature arise during the exhibition, and the Secretary is expected to decide upon them immediately and correctly. Some rules for the guidance of exhibitors in this regard should be published with our premium list. It is not an uncommon thing, when the judges call for "blood horses," to see a rush of all kinds, from the turf horse down to a pony; many people thinking that if they can trace the pedigree of their animal back to anything of note, it is what is meant by the term "blood horse." Undoubtedly some, if not all of you, understand the operation of these things much better than I do, and will know how to remedy the errors. I have seen some of you within the last four months, placed in situations that required the exercise of much patience and perseverance in order to set exhibitors right upon these points.

Class 3 and 4, farm implements, should be so divided as to give these to two or three examining committees instead of one, as is now the case. The duties of the committee on these two classes, at the last fair, were exceedingly arduous; also the committee on miscellaneous articles. With regard to miscellaneous articles, the farther you extend the different classes, you take in some of what are now put into the class of miscellaneous articles. Classes five, six and seven, cattle—were all given to one committee. I think the work of this committee should be divided, or a larger committee appointed, that they may divide the labor. Mowing and reaping machines are looked upon by our farmers with much interest, but they cost money, and before purchasing, they wish this Society to tell them which is the best machine for their use, and they wish you to give your reasons in full. This cannot be done satisfactorily to yourselves, or the community, by merely examining the machines, without seeing them work. Can you not devise some way by which the desired object may be attained?

Each year since the organization of the Society we have received aid from the State Treasury. The act of the Legislature appropriating this aid has now expired. Our treasury is empty, and we are a few

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hundred dollars in debt, but we have lumber on hand that cost the Society some $1400 to $1600. It was thought better to keep the lumber and loan money to pay our debts, rather than to raise money by disposing of the lumber.

The price of member's tickets being 50 cents for continuance of membership, it is thought, has proved, in a measure, detrimental to the interests of the Society. By a vote of the Society at its annual meeting in September last, the price of member's tickets was placed at $1 00 each, and single tickets at 25 cents each. It is expected that this change in the price of tickets, together with the aid we may expect from the State Treasury, will enable the Society, not only to extend its premium list, but to offer larger awards, thus throwing out greater inducements to competitors.

All of which is respectfully submitted.

J. C. HOLMES,
Sec'y Mich. State Ag'l Society.

Committee appointed to examine the Treasurer's report: Messrs. Dort, Smith and Green.

On motion of Mr. Moore,

Resolved, That the Society will hold its Fifth Annual Fair at Detroit, provided the citizens will secure to the Society the sum of one thousand dollars, by the 15th day of May, 1853, to assist in defraying the local expenses of the Fair; otherwise at such other town as shall secure to the Society the largest amount for the same purpose by the 15th day of June, 1853.

On motion of Mr. Green,

Resolved, That the Fifth Annual Fair be held on Wednesday, Thursday, and Friday, the 28th, 29th and 30th of September, 1853.

On motion of Mr. Dort,

Resolved, That the sum of $3500 be appropriated to be awarded as premiums at the Fifth Annual Fair.

Committee appointed to revise and report for the consideration of the meeting, rules and regulations to be observed at the next Fair:

Mr. Butterfield, Mr. Clark, Mr. Moore.

Committee to revise and report a list of premiums to be offered at the next Annual Fair:

Mr. Shoemaker, Mr. Geo. C. Munro, Mr. J. R. Monroe.

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On motion of A. Y. Moore,

Resolved, That the President be requested to draft a memorial to the Legislature for aid for the years 1853 and 1854; also for publishing the Transactions of the Society for 1852, 1853 and 1854.

Committee appointed to act as a business committee for the succeeding year:

Mr. Dort, Mr. Shoemaker, Mr. Holmes.

Committee appointed to examine and report upon reports of farms and farm crops:

Mr. Jay R. Monroe, Mr. Smith, Mr. Moore.

Committee appointed to examine the petition, and accompanying documents presented by Mr. Roberts, of Wayne County, respecting the Potato Rot:

Mr. Green, Mr. Dort, Mr. Butterfield.

At 8 o'clock, P. M., adjourned to 9 o'clock, A. M., of Wednesday 15th.

Wednesday 15th, half-past 9 o'clock, A. M., committee called to order.

President in the Chair.

The several sub-committees not being ready to report, the committee adjourned to meet at 2 o'clock, P. M.

EVENING SESSION.

Half-past 6 P. M., committee called to order.

Mr. Dort in the Chair.

Committee on Rules and Regulations reported; their report, after considerable discussion and some amendments, was adopted.

The committee appointed to report a list of premiums to be awarded at the Fair of 1853, was under discussion at 9 o'clock, P. M., when the Society adjourned to 9 A. M. of the 16th.

THURSDAY, Dec. 16th, 9 o'clock A. M.

The committee called to order.

The President in the Chair.

At half-past 9 A. M., the President being called from the room, Mr. A. Y. Moore, was called to the Chair.

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The premium list was again taken up, and after much discussion and several amendments, was finally adopted, at half-past 11 A. M.

On motion of Mr. Butterfield,

Resolved, That each viewing committee consist of five members, and that three shall constitute a quorum.

The committee to whom was referred the memorial of Mr. E. C. Roberts, of Salem, respecting the potato rot, its cause and cure, report, that Mr. Roberts appeared before your committee and made a full statement of the result of his experiments during the last five years, by which he claims to have discovered a radical cure for the blight in that vegetable. He asserts that the potato has become diseased from a neglect of its natural laws in saving the seed. The principle he adopts is intended to purify and renovate the seed; all of which, he believes, he has successfully accomplished; of this fact your committee are not fully satisfied, yet they would recommend that this subject be treated of in a memorial to the next Legislature, and that we pray them to offer a proper reward to Mr. Roberts, or any other person, who shall be the actual discoverer of the cause, and a permanent cure of this disease, to be tested by future experiments and facts. Also that the Executive committee offer a premium to any one who will furnish satisfactory evidence of an effectual cure for the potato disease.

C. W. GREEN,
TITUS DORT,
IRA H. BUTTERFIELD.

The above report, after a brief discussion, was, on motion, laid on the table.

On motion of Mr. Dort,

Resolved, That the Secretary be instructed to deliver to each member of the Executive Committee, one copy of the first volume of the Transactions of the Indiana State Board of Agriculture.

On motion of Mr. Moore,

Resolved, That the resolution relative to distribution of reports of Indiana State Board of Agriculture, be so amended as to provide for distribution of one copy to each of the Ex-Presidents of this Society, each of the organized County Agricultural Societies, each ex-member of the Executive Committee of this Society, and each of the agricultural

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papers of this State, and three copies to the State Library, provided there is found to be a sufficent number.

On motion of Mr. Jay R. Monroe,

Resolved, That there shall be a trial of reaping and mowing machines, plows, seed drills and planting machines, under the direction of the business committee, at such time and place as they may appoint.

On motion of Mr. Dort,

Resolved That the business committee be instructed to confer with the officers of the Society in Detroit, "For the Improvement of the breed of Horses," and request them to hold their fall races upon such days as will not interfere with the Fair of this Society.

On motion of Mr. Shoemaker,

Resolved, That the railroad companies within this State be requested to transport plaster over their roads, gratuitously, for the use of the farming population, inasmuch as its general introduction would finally enhance the income of those roads by the consequent increase of transportable produce on the roads. Also,

Resolved, That the railroad companies in the State be requested to reduce the price of transportation on agricultural implements, to the lowest point compatible with the mutual interests of those corporations and the agricultural community.

Resolved, That the business committee be instructed to memorialize or otherwise address the Superintendents or Directors of the railroad companies in this State, for the purpose of carrying into effect the above resolutions.

On motion of Mr. Moore,

Resolved, That that part of the report of the Secretary which relates to procuring a room for the use of the Secretary, be referred to the business committee with instructions for them to take action thereon.

On motion of Mr. J. R. Monroe,

Resolved, That the thanks of this Society be tendered to the Indiana State Board of Agriculture, for fifty copies of the Transactions of their Society; also, that the Secretary be instructed to transmit to the State Board of Agriculture of Indiana, twelve copies each of vol. 1, 2, 3, and 4, of the Transactions of this Society, and pay the transportation upon the same.

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On motion of Mr. Shoemaker,

Resolved, That if any of the members of the Executive Committee of this Society wish to attend a State Agricultural Fair in any other State, the Fair of the American Institute, or the World's Fair in New York, the Secretary be and he is hereby instructed to furnish them with credentials as delegates from the Michigan State Agricultural Society.

On motion of Mr. Shoemaker,

Resolved, That the Secretary be, and he is hereby instructed to procure, for the purpose of publishing with the Transactions of the Society, wood cuts of such animals as he may select from among those that have taken a first prize at either the fairs of this Society, provided a portrait be furnished free of charge, and the owner of the animal pay one-half the charge of the cut, for the use of it after being used for the Transactions.

Adjourned to 7 P. M.

EVENING SESSION.

At the request of the committee, the President drew up and reported the following memorial, which was adopted:

To the Senate and House of Representatives of the State of Michigan:

The memorial of the Executive Committee of the Michigan State Agricultural Society, respectfully represents that the government of a State fails to perform its legitimate functions, when it fails by liberal and constitutional means to promote its prosperity and develop its resources; that Annual State Fairs under the auspices of the State Agricultural Society, have already awakened a more enlightened interest in agricultural improvements; have conduced to the introduction of improved breeds of stock; have tended to a wider dissemination of the best seeds and fruits; have called into use more economical and effective agricultural implements; have stimulated the mechanic arts; have aroused a lively interest in the necessity of enlightening the head as well as strengthening the arm of the tiller of the soil; and generally caused a just appreciation of those means and appliances vital to agricultural progress, without which we must inevitably fall behind our sister communities.

In view of these facts they earnestly and respectfully urge your honorable bodies to appropriate one thousand dollars for the uses of the Society for each of the years 1853 and 1854, to be paid whenever the

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Treasurer of the Society shall file with the Auditor General his affidavit that the sum of one thousand dollars has been raised by voluntary subscriptions or fees of membership, provided the same is done before the 15th day of October, for those years respectively.

They also respectfully urge your honorable bodies to cause to be printed two thousand copies at least, of the Annual Reports of the Michigan State Agricultural Society for the years 1852 and 1853, to be distributed under such restrictions as may be deemed most conducive to the objects of the Society.

(Signed) JOSEPH R. WILLIAMS, *Pres't.*
TITUS DORT,
JAY R. MUNROE,
IRA H. BUTTERFIELD,
A. Y. MOORE,
F. V. SMITH,
C. W. GREEN,
THOMAS CLARK,
Executive Committee.

J. C. HOLMES, *Secretary.*

On motion,

Resolved, That Messrs. Dort, Shoemaker and Moore, be a committee to urge upon the Legislature the propriety of carrying into immediate effect the 11th section of the 13th article of the constitution of the State relative to a State Agricultural School, with advice that it be adopted as a branch of the University, and placed under the control of the Regents, that such instruction and lectures of the Professors of the University as is practicable, and desirable for the Agricultural School shall be secured; that such measures be taken as will lead to the final establishment of a model and experimental farm; that the permanent location of said school and farm should be upon a tract or tracts, not less than 640 acres of University lands, which henceforth should be reserved from sale; and that in the view of this Society the contemplated school and farm should not be established in immediate proximity to any existing educational institution; and that the income of the salt spring or other lands named in said section of the constitution be inviolably set apart for the support of said school.

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Resolved, That said committee be instructed to urge upon the favorable consideration of the Legislature the memorial of this Society, asking an appropriation of One Thousand Dollars per annum, for the years 1853 and 1854, and the printing the 5th and 6th Annual Reports, at the expense of the State.

EVENING SESSION.

Mr. Palmer, one of the Regents of the University, being present during the consideration of the resolution respecting an Agricultural School, was, on motion of Jay R. Monroe, invited to make some remarks respecting the intentions of the Regents and Professors with regard to said school. Whereupon Mr. Palmer made a few brief remarks upon the subject.

On motion of Mr. Moore,

Resolved, That Doct. H. P. Tappan, Chancellor of the University of Michigan, be invited to deliver the Annual Address before the Society at its Annual Fair, in Sept., 1853.

At a quarter past 9 o'clock P. M., the committee adjourned to 8 A. M., of the 17th.

MORNING SESSION.

Dec. 17th.—Committee called to order at 9 o'clock A. M.

The President in the Chair.

On motion of Mr. Dort,

Resolved, That a premium of One Hundred Dollars be offered by this Society for satisfactory evidence produced to the Executive Committee at its annual meeting in 1853, for a discovery of the cause and a permanent cure of the Potato Rot.

AFTERNOON SESSION.

On motion of Mr. Moore,

Resolved, That the Secretary's expenses be paid by the Society, when he is absent from home on business of the Society.

On motion of Mr. Smith,

Resolved, That the unfinished business of the committee to whom was referred the report of the Treasurer, be referred to the business committee.

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On motion of Mr. Green,

Resolved, That the Secretary be instructed not to furnish a copy of the Premium List for publication, until it has been examined by the committee who reported it: provided that examination shall be had by the 15th day of January, 1853.

Adjourned to 2 o'clock P. M.

RULES AND REGULATIONS,

To be observed at the Fifth Annual Fair of the Michigan State Agricultural Society, to be held at Detroit, on Wednesday, Thursday, and Friday, September 28th, 29th and 30th, 1853.

The Committee on the reception of strangers and members of committees, will have their head quarters at the Agricultural Rooms, Cooper's Building, Detroit, on Tuesday evening, the 27th, and on the days of the Exhibition, at the Business Office, on the show ground.

A Register will be opened at the room of the committee, where strangers and members of committees will please register their names immediately upon their arrival.

Members of viewing committees are requested to report themselves to the Secretary, at the Committee's room, immediately upon their arrival, in order that all vacancies that occur may be filled at a meeting of the Executive Committee, to be holden on the 28th, at 3 o'clock P. M., on the show ground.

It is of the utmost importance that committees should be at their posts at the hour appointed for their meeting.

Any person may become a member of the Society, for one year, by paying $1 00 into the Treasury.

Members of the Society, and all who may become such at the time of the Fair, will be furnished with tickets which will admit the person and his wife, and children under eighteen years of age, to the Exhibition, at all times during the continuance of the show.

Single tickets, twenty-five cents, admitting one person, will be for sale at the business office, on Thursday morning.

Exhibitors who intend to compete for premiums, must become members of the Society.

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In order to save time and confusion, exhibitors are requested to enter and arrange their articles as far as possible, on Monday and Tuesday, the 26th and 27th, so that all may be in readiness for examination by the Judges, on Thursday, 29th, at 9 o'clock A. M.

Persons employed for the purpose, and wearing appropriate badges, will be in readiness on the ground to receive the articles intended for exhibition in their several departments.

Exhibitors will be careful to have their animals and articles arranged in their appropriate places, and in season, otherwise they will be overlooked by the viewing committees.

All articles intended for exhibition must be entered at the Business Office, at the entrance of the show ground, before entering the enclosure. Exhibitors of stock should be very careful to enter their animals in their appropriate class; any grade animal entered as a full blood, will be excluded from competition in the class to which it belongs.

All stock entered as thorough bred, must be accompanied with a concise written statement certified to by the breeder or owner, specifying the age, breed, pedigree, and mode of feeding. The age of Natives and Grades, including working oxen and steers, will be required, and far as possible, the pedigree. For fat cattle, a short statement of the kind of food, manner and length of time of feeding, &c., will be required.

Cards will be furnished with the number and name as entered at the Office. Exhibitors will be careful to place these cards upon or near the articles or animals, so that the Judges will have no difficulty in finding them. No animals or articles entered for exhibition can be taken from the ground before the close of the Fair, except by permission of a member of the Executive Committee; and no premium will be paid on animals or articles removed in violation of this rule.

INSTRUCTIONS TO JUDGES.

The Judges on animals, will have regard to the symmetry, early maturity, size, and general characteristics of the breeds which they judge. They will make proper allowances for age, feeding, and other circumstances on the character and condition of the animals. They are expressly required not to give encouragement to over fed animals. No premiums to be awarded to bulls, cows or heifers, which shall appear to have been fattened for the butcher; the object being to have superior animals of this description for breeding.

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No person whatever, will be allowed to interfere with the Judges during their adjudications. The Judges on stock, if not satisfied as to regularity of the entries in their respective classes, will apply to the Secretary for information; and should there be any doubt, after examining, of their coming within the regulations, or if any animal is of such a character as not to be entitled to exhibition in competition, they will report to the Executive Committee, that such course may be adopted as the case may require.

FAT CATTLE.

The Judges on fat cattle, will give particular attention to the animals submitted to them for examination. It is believed that all other things being equal, those are the best cattle that have the greatest weight in the smallest superfices. The cattle exhibited in this class will be weighed, and the Judges will take measures to give the superfices of each, and publish the result with their reports.

GENERAL RULES.

A premium will not be awarded when the animal or article is not worthy, though there be no competition.

No viewing committee, with the exception of the committee on miscellaneous articles, shall award any discretionary premiums, without the previous permission of the Executive Committee. Whenever, however, articles of merit, superior in their character are presented, and which are entitled to special commendation, the Judges are desired to notice them particularly and refer them to the consideration of the Executive Committee. No animal or article can take more than one premium except as specially provided.

As one great object of the Society is to collect valuable information upon subjects connected with agriculture, the several viewing committees are requested to gather all the information possible of exhibitors in their several departments, and embody in their reports all valuable information thus elicited, and make their reports as full as time and circumstances will permit.

Judges are requested to make their reports to the Secretary, at the Business Office, by 8 o'clock A. M., Friday 30th.

Stock, to compete for premiums must be exhibited by the owner or his agent.

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Domestic manufactures, needle, shell-work, &c., must have been manufactured in the State, and within the year, except such articles as have not been heretofore exhibited, and such articles, together with fruits, flowers, vegetables, &c., must be the production of the exhibitor in order to entitle the competitor to a premium.

All animals and all articles brought from out of the State for exhibition, shall be entered and marked as foreign, and shall not come in competition with animals or articles owned in the State; but animals or articles of the State may come in competition with said foreign animals or articles, although they may be entered for competition in the State.

When there is no foreign stock to compete with, no premium will be awarded in that class.

Animals and Implements having received the first premium at a previous fair, if considered superior, may be awarded a Diploma, but cannot compete for the first premium in the same class.

Persons exhibiting several articles, will, when making their entries, have written lists of their articles, with the name of the exhibitor, and the place of residence attached, to hand to the book-keeper at the Business Office.

Exhibitors of stock will, in making out their lists, give all the information possible concerning their animals. They will also be careful to enter their stock in the class to which they belong.

In the Horticultural department, it is particularly desirable that complete and correct memorandums should be rendered.

ORDER OF PROCEEDINGS.

On Wednesday, 28th, at 3 o'clock P. M., the Executive Committee will hold a meeting at the Business Office, on the show ground, for the purpose of filling any vacancies that may occur in the viewing committees.

All members of viewing committees who may be on the ground, will be particular to attend this meeting.

The viewing committees will receive their committee books from the Secretary, at his office on the show ground, at 9 o'clock A. M., of Tuesday 29th, and commence their examinations immediately thereafter.

PLOWING MATCH.

The plowing match will take place at 1 o'clock P. M., 29th.

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ANNUAL ADDRESS.

The Annual Address will be delivered by Dr. H. P. Tappan, on the show ground, at 3 o'clock P. M., of the 29th.

REPORTS.

The reports of the Judges will be read on Friday, at 10 o'clock A. M. The Judges will be expected to give the reasons for their decisions, embracing the valuable and superior qualities of the animals or articles to which premiums are awarded.

PREMIUMS.

Premiums will be forwarded to the persons to whom they are awarded, at as early a day after the Fair as practicable.

ANNUAL MEETING.

The Annual Meeting of the Society, for the choice of officers, and for the transaction of such other business as may come before the meeting, will take place on the show ground at 11 o'clock A. M. of the 30th, or immediately after the reading of the reports of committees.

SALE OF STOCK AND IMPLEMENTS.

A public sale of stock and implements will commence at 12 o'clock M., of the 30th.

RULES FOR THE PLOWING MATCH.

Persons entering for the plowing match, will observe the following rules and regulations:

1st. Each team will be required to plow one quarter of an acre; in order to insure good work, one hour and thirty minutes will be allowed in which to perform it.

2d. The team may consist of one or two pair of horses, or oxen, provided they are managed by the plowman.

3d. The plow may be held by the competitor, or such person as he may select; but the name of the plowman in all cases to be given.

4th. Each plowman will be required to mark out his land, by plowing at least four back furrows, from a strip left for that purpose, before commencing on time.

5th. The furrows must be at least seven inches deep, and not over twelve inches wide.

The excellence of the work to consist: 1st. In leaving the furrow slice light and pliable. 2d. In so disposing of the sod and vegetable matter as to insure their ready decomposition.

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Jointer, Sub-soil and Double plows may compete for premiums, but not with other plows.

Persons with Double or Sub-soil plows, competing for premiums may use one or more teams, with or without a driver, but shall run their plow not less than ten inches deep.

MANAGEMENT OF FARMS.

Premiums will be awarded by the Executive Committee, at its Annual Meeting, in December, 1853.

For the best Cultivated Farm: reference being had to cultivation, stock, improvements, expenses and products, &c.,				$50 00
For the 2d best	do	do	do	30 00
For the 3d best	do	do	do	20 00
For the 4th best	do	do	do	10 00

Any person making application for the premiums, must answer the following questions:

The object in requiring answers to these questions, being to elicit information, it is expected that the answers will be written out as much in detail as possible.

All who furnish full answers to the questions, will receive premiums, in addition to the premiums offered above, consisting of the Society's Diploma, and one or two volumes of the Society's Transactions, according to the value of such reports.

SOILS, &C.

1. Of how much land does your farm consist? and how much wood, waste, and improved land respectively?

2. What is the nature of your soil and sub-soil? Is there limestone in it?

3. What do you consider as the best mode of improving the different kinds of soil on your farm? of clay, if you have it? of sandy soil, and of gravelly soil? Answer respectively.

4. What depth do you plow? What effect has deep plowing had on your various soils?

5. Have you made any experiments to test the difference in a succeeding crop, between shallow, common, or deep plowing?

6. Have you used the double, or sub-soil plow? and what have been its effects on different soils and crops? Have you drained any of your lands? if so, what soils, and with what results?

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7. What trees and plants are indigenous to your soil? give the names of each?

MANURES.

8. How many loads of manure (30 bushels per load,) do you usually apply per acre? How do you manage your manure? is it kept under cover, or are there cellars under your barns or stables for receiving it?

9. How is your manure applied: whether in its long or green state, or in compost? For what crops, or under what circumstances do you prefer using it, either in a fresh or rotten state?

10. Have you used lime, plaster, guano, salt, or any other substance not in common use as manure? In what manner were they used, and with what results?

TILLAGE CROPS.

11. How many acres of land do you till? and with what crops are they occupied, and how much of each crop?

12. What is the amount of seed planted or sown for each crop? the time of sowing—the mode of cultivating, of harvesting, and the product per acre? Have any insects been found injurious to your crops? if so, describe them, and the remedies adopted?

13. How deep do you have manure covered in the earth, for different crops and different soils?

14. Have your potatoes been affected with any peculiar defect or disease, and have you been able to discover any clearly proved cause for it, or found any remedy?

GRASS LANDS, &C.

15. What kind of grasses do you use? How much seed of clover or the various kinds of grass do you sow to the acre? At what season of the year do you sow? and what is the manner of seeding? What kinds of grass are best adapted to lands used for dairy purposes?

16. How many acres do you mow for hay, and what is the average product? At what stage do you cut grass, and what is your mode of making hay?

17. Is any of your mowing land unsuitable for the plow, and what is your mode of managing such land?

18. Have you reclaimed any low, bog or peat lands? What was the mode pursued, the crops raised, and what success?

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19. Have you succeeded in eradicating the weeds from your farm, if so, by what methods, and what weeds are most troublesome?

DOMESTIC ANIMALS.

20. How many oxen, cows, young cattle and horses do you keep, and of what breeds are they?

21. Have you made any experiments to show the relative value of different breeds of cattle or other animals for particular purposes, and with what results?

22. What do you consider the best and cheapest manner of wintering your cattle, as to feed, watering and shelter?

23. How much butter and cheese do you make annually, from what number of cows, and what is your mode of manufacture?

24. How many sheep do you keep? Of what breed or breeds are they? How much do they yield per fleece, and what does the wool bring? How many of your sheep usually produce lambs and what number of sheep are usually reared? How much will your sheep or lambs sell for per head to the butcher?

25. What do you consider the best and cheapest manner of wintering your sheep, as to food, watering and shelter? How many in proportion to your flock (if any) do you lose during the winter?

26. How many swine do you keep, of what breed are they, how do you feed them, at what age do you kill them, and what do they weigh when dressed?

27. What experiments have you made to show the relative value of potatoes, turnips, and other root crops, compared with Indian corn, or other grain, for feeding animals, either for fattening or for milk.

FRUIT.

28. What is the number of your apple trees? Are they of natural or grafted fruit, and chiefly of what varieties?

29. What number and kind of fruit trees, exclusive of apples, have you? and what are among the best of each kind?

30. What insects have attacked your trees, and what method do you use to prevent their attacks?

31. What is your general management of fruit trees?

32. What other experiments or farm operations have produced interesting or valuable results?

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FENCES, BUILDINGS, &C.

33. What is the number, size, and general mode of construction of your farm, buildings, and their uses?

34. What kind of fences do you construct? What is the heighth and length of each kind, and their cost and condition? Have you constructed any wire fence? If so, what has been its cost, and what its advantages, and how made?

35. To what extent are your various farming operations guided by accurate weighing and measuring? And to what degree of minuteness are they registered by daily accounts?

36. Do you keep regular farm accounts? Can you state the annual expense in improving your farm, and the income from it, with such precision that you can at the end of the year strike an accurate balance of the debt and credit? Would not this practice conduce very much to close observation, careful farming, and in the end much improve your system, as well as better your fortune?

37. Give the annual receipts and expenditures on your farm, specifying each.

The persons making applications for premiums on farms, must submit written answers to these questions, which will be furnished by the Secretary, to all who may apply for them.

The statements to be forwarded to the Recording Secretary at Detroit, on or before the first day of December, 1853.

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THE FIFTH ANNUAL FAIR.

The Fifth Annual Fair of the Michigan State Agricultural Society was held at Detroit, on the Cas- and Jones' farms, between the Chicago and Grand River roads, and west of Third street, on the 28th, 29th and 30th days of September, 1853.

The Election of Officers for 1854, took place on the Fair Ground, at half past 3 o'clock P. M. of the 30th, when the following officers were duly elected:

President—GEORGE C. MUNRO, Jonesville, Hillsdale county.

Treasurer—H. H. BROWN, Detroit, Wayne county.

Secretary—J. C. HOLMES, Detroit, Wayne county.

Executive Committee—Jay R. Monroe, Paw Paw, Van Buren county; Samuel M. Bartlett, Lasalle, Monroe county; John Starkweather, Ypsilanti, Washtenaw county; C. W. Green, Farmington, Oakland Co.; G. V. N. Lothrop, Detroit, Wayne county; John Miller, Adrian, Lenawee county: A. Y. Moore, Schoolcraft, Kalamazoo county; Payne K. Leach, Utica, Macomb county; Charles Dickey, Marshall, Calhoun Co.; Thomas Clark, Lapeer, Lapeer county.

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ANIMALS

AND ARTICLES EXHIBITED.

List of Exhibitors and Articles exhibited at the Society's Fifth Annual Fair:

BULLS.

P. K. Leach, Utica, Macomb county, Devon, 3 years old.
J. R. Grosvenor, Monroe, Monroe, " 5 "
Riley C. Cone, Troy, Oakland, " 5 "
J. W. Childs, Paint Creek, Washtenaw, " 3 "
J. D. Ballard, Jackson, Jackson, " 3 "
Chas. Ransom, Kalamazoo, Kalamazoo, " 3 "
Jas. Nichols, Eaton Rapids, Eaton, " 4 "
W. H. Miller, Moscow, Hillsdale, " 6 "
O W. & G. P. Bennett, Jackson, Jackson, " 4 "
F. V. Smith, Coldwater, Branch, " 4 "
J. A. Austin, Detroit, Wayne Co., Durham, 4 years old.
Ira Phillips, Romeo, Macomb, " 6 "
Latshaw & Johnson, Erie, Monroe, " 1 "
George Graham, Lasalle, " " 5 "
Cyrus Fuller, Livonia, Wayne, " 3 "
M. H. Alon, Tecumseh, Lenawee, " 6 "
D. M. Uhl, Ypsilanti, Washtenaw, " 3 "
Chas. H. Wines, Chelsea, do " 1 "
Samuel Blackwood, Novi, Oakland, " 6 "
do do do do " 2 "

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J. B. Leland, Ann Arbor, Wash., Durham, 1 year old.
Moses Allen, Plymouth, Wayne, " 1½ "
R. B. Gelaspie, Tecumseh, Lenawee, " 1 "
E. Barns, London, Monroe Co., cross of Durham & Devon, 6 years old.
Wm. Canfield, Mt. Clemens, Macomb Co., cross of Blood, 3 years old.
Oliver Hampton, Hickory Grove, Jackson, " " 1 "
E. T. Bryan, Marengo, Calhoun, " " 2 "
Wm. Gass, Ray, Macomb, " " 3 "
L. D. Owen, Romeo, Macomb, " " 2 "
Roswell Waterman, Ann Arbor, Washtenaw, " " 1 "
L. F. Olmstead, Sturgis, St. Joseph, " " 3 "
F. Danforth, Olivet, Eaton county, Grade, 2 years old.
E. L. Power, Livonia, Wayne, " 1 "
Robt. Hamilton, Bruce, Macomb, " 2 "
Z. L. Easton, Superior, Washtenaw, " 1 "
Leonard Lee, Armada, Macomb, " 1 "
O. Botsford, Farmington, Oakland, " 2 "
L. H. Hubbard, Mt. Clemens, Macomb, " 4 "
C. G. Wheeler, Ypsilanti, Washtenaw, " 2 "
W. S. Higley, Lapeer, Lapeer, Native, 1 "

COWS.

J. W. Childs, Paint Creek, Washtenaw Co., Devon, 5 years old.
do do do do do " 1 "
Latshaw & Johnson, Erie, Monroe, " 5 "
O. W. & G. P. Bennett, Jackson, Jackson, " 7 "
do do do do " 1 "
F. V. Smith, Coldwater, Branch, " 4 "
do do do " 8 "
do do do " 6 "
Ira H. Butterfield, Utica, Macomb county, Durham, 4 years old.
Harvey Austin, Norville, Jackson, " 2 "
John Starkweather, Ypsilanti, Washtenaw, " 5 "
do do do " 3 "
George Graham, Lasalle, Monroe, " 1 "
George W. Graham, do do " 1 "
D. C. Blair, Tipton, Lenawee, " 4 "
do do do " 3 "

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A. Y. Moore, Schoolcraft, Kalamazoo, Durham, 11 years old.
O. W. & G. P. Bennett, Jackson, Jackson, " 3 "
A. T. McReynolds, Detroit, " 7 "
Andrew Wilkie, do " 3 "
F. E. Eldred, do Hereford, 9 "
Harvey Austin, Norville, Jackson co., Cross of Blood, 3 years old.
Oliver Hampton, Hickory Grove, Jackson, " 1 "
J. B. Arms, Dexter, Washtenaw, " 4 "
do do do " 2 "
L. D. Owen, Romeo, Macomb, " 2 "
Justin Kellogg, Ypsilanti, Washtenaw, " 4 "
A. Y. Moore, Schoolcraft, Kalamazoo, " 6 "
do do do " 2 "
John W. Collins, Farmington, Oakland, " 3 "
Moses Allen, Plymouth, Wayne county, Grade, 8 years old.
F. E. Eldred, Detroit, " 5 "
James Smith, Detroit, " 8 "
do do " 5 "
Nathan Davis, Troy, Oakland, " 5 "
Calvin A. Green, Troy, do " 5 "
S. A. Randall, Norville, Jackson, " 4 "
James B. St. John, Romeo, Macomb, " 2 "
John Starkweather, Ypsilanti, Washtenaw, " 3 "
E. Potter, Albion, Calhoun, " 8 "
D. M. Uhl, Ypsilanti, Washtenaw, " 6 "
do do do " 7 "
do do do " 4 "
do do do " 1 "
do do do " 1 "
O. W. & G. P. Bennett, Jackson, Jackson, " 2 "
J. L. Stout, Troy, Oakland, " 7 "
do do do " 1 "
F. W. Backus, Detroit, " 5 "
Charles Lee, do " 5 "
John Roberts, do " 8 "

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Moses Allen, Plymouth, Wayne county, Native, 5 years old.
Wm. S. Higley, Lapeer, Lapeer, " 1 "
James Smith, Detroit, " 5 "
O. W. & G. P. Bennett, Jackson, Jackson, " 6 "
Wm. Moore, Detroit, " 8 "
G. W. Collins, Farmington, Oakland, " 6 "

BULL CALVES.

Chas. Ransom, Kalamazoo, Kalamazoo Co., Devon 3 months old.
O. W. & G. P. Bennett, Jackson, Jackson, " 4 "
F. V. Smith, Coldwater, Branch, " 6 weeks old.
Moses Allen, Plymouth, Wayne county, Durham, 5 months old.
Harvey Austin, Norville, Jackson, " 6 "
Ira Phillips, Romeo, Macomb, " 10 "
John Starkweather, Ypsilanti, Washtenaw, " 4 "
D. C. Blair, Tipton, Lenawee, " 6 "
do do do " 2 "
A. Y. Moore, Schoolcraft, Kalamazoo, Cross Blood 6 "
J. W. Collins, Farmington, Oakland, " 5 "
Calvin A. Green, Troy, Oakland county, Grade, 5 "
O. W. & G. P. Bennett, Jackson, Jackson " 4 "
J. L Stout, Troy, Oakland, " 5 "

HEIFER CALVES.

J. W. Childs, Paint Creek, Washtenaw Co., Devon, 6 months old.
F. V. Smith, Coldwater, Branch, " 4 "
do do do " 4 "
do do do " 4 "
Chas. Ransom, Kalamazoo, " 3 "
do do " 3 "
do do " 3 "
Nathan Davis, Troy, Oakland, Grade, 4 "
S. A. Randall, Norville, Jackson, " 3 "
E. Potter, Albion, Calhoun, " 3 "
D. M. Uhl, Ypsilanti, Washtenaw, " 7 "
do do do " 4 "
Chas. Lee, Detroit, "

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John W. Collins, Farmington, Oakland, Cross of Blood, 4 years old.
Justin Kellogg, Ypsilanti, Washtenaw, " 5 "
A. Y. Moore, Schoolcraft, Kalamazoo, " 6 "
do do do " 2 "
S. A. Randall, Norville, Jackson county, yoke Grade steers, 2 years old.
John Starkweather, Ypsilanti, Washtenaw, " " " 2 "
do do do one fat " " 2 "
E. M. Deforest, Ann Arbor, do yoke oxen, 7 "
James Taylor, Kalamazoo, Kalamazoo, one fat ox, 7 years old.
A. L. Gilbert, Corunna, Shiawassee, yoke Native steers, 1 year old.
L. B. Shaw, Kalamazoo, Kalamazoo, yoke oxen, 8 years old.
C. W. Green, Farmington, Oakland, " 5 "
do o do " 5 "
J. R. Monroe, Paw Paw, Van Buren, " 8 "
Geo. Chamberlain, Redford, Wayne, one yoke steers, 3 years old.
John Sly, Plymouth, Wayne, pair fat oxen, 8 years old.
John W. Collins, Farmington, Oakland, yoke oxen, 5 years old.
F. V. Smith, Coldwater, Branch, yoke Grade steers, 3 years old.
do do do " " 3 "
J. W. Collins, Farmington, yoke oxen.

FOREIGN CATTLE.

S. P. Seward, Richmond, Ontario Co., N. Y., Durham bull, 3 years old.
M. L. Brooks, Northville, Wayne Co., Mich., Durham bull, 6 years, old.
do do do do " cow, 4 "
do do do do " heifer, 2 "
do do do do " " 2 "
do do do do 4 " " 1 "
do do do do " calf, 3 months old.
do do do do " " 2 "
do do do do " " 1 "
Isaac Ask[illegible] [illegible]herstburgh, C. W., " bull, 6 years old.
do do do " cow, 4 "
do do do Cross Blood cow, 3 "
do do do " calf.
do do do 2 Grade calves, 5 months old.

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Spencer Peel,	Anderdon,	C. W.,	Durham	bull,	6 years old.
do	do	do	"	cow, 10	"
do	do	do	"	" 6	"
do	do	do	"	" 5	"
do	do	do	"	" 4	"
do	do	do	"	" 3	"
do	do	do	"	" 2	"
do	do	do	"	bull calf, 5 months old.	
Wm. Sandford,	Gosfield,	do	Cross Blood	bull calf, 13 months old.	

STALLIONS.

B. Dewey, Troy, Blood Stallion, "Eclipse," 9 years old.

Fernando Wing, Port Huron, Blood Stallion, "Young Nimrod," 5 years old.

Calvin A. Green, Troy, Blood Stallion, "Sir Archy," 9 years old.

Richard Carlton, Royal Oak, for all work, "Young Eclipse," 4 years old.

James Crawford, Romeo, do 1 year old.

Cheney Hill, Richfield, draught, "Sampson," 16 years old.

Owen McElroy, Kalamazoo, "Robin," 3 "

Henry G. Love, Marion, "Bay Messenger," 4 "

Peter Kanouse, Tuscola, "Young Duroc," 4 "

J. R. Goodrich, Pinckney, "Black Hawk," 2 "

Isaac Thompson, Romeo, "Young Eclipse," 6 "

H. B. Clark, Lawrence, Blood, "Goldfinder," 1 "

J. D. Van Hovenberg, Jonesville, "Bay Messenger," 5 years old.

do do do "Young Messenger," 3 "

A. Blanchard, Colon, "Young Morgan," 7 "

Robt. Milliken, Almont, for all work, 2 "

Thos. Morton, do draught, 2 "

Joel T. Griffin, Clarkstown, for all work, 3 "

A. Knapp, Northville, "Duroc," 1 "

J. A. Marshall, Adrian, "Nottingham Sampson," 8 "

W. R. Tayer, do "Morgan Black Hawk," 6 "

George Smith, Saline, Blood, "Duroc," 2 "

do do do "Marshall," 7 "

A. B. Moore, Three Rivers, Blood, 6 "

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A. Y. Moore, Schoolcraft, Blood, "Bucephalus," 10 years old.
J. Fannahill, Kalamazoo, Draught, "Young Clide," 9 "
Wm. C. Shaft, Genoa, "Napoleon Backus," 9 "
S. B. Blood, Kalamazoo, "Sherman Black Hawk," 6 "
Henry Fox, Detroit, "Young Sir Henry," 8 "
D. F. Hendricks, Marshall, "Bay Morgan," 6 "
E. J. Young, Port Huron, "Dandy," 3 "
E. H. Cressey, Troy, "Young Morgan," 4 "
Nathan Earle, Plymouth, Native, 3 "
Asa H. Otis, Greenfield, "Young Sampson," 7 "
F. Pareaux, Dowagiac, French, 3 "
G. Knight, Schoolcraft, for all work, 4 years old.
B. G. Whitney, Armada, " 9 years old.
Chester Reynolds, Southfield, " 3 years old.
Alexander Morrison, Lexington, "Young Clyde," 5 years old.
B. P. Ensign, Detroit, Messenger, "Post Boy," 3 years old.
C. G. Wheeler, Ypsilanti, Blood, "Young Apaloosa," 5 years old.
Giles & Smith, Blissfield, Blood, "Post Boy," 22 years old.
J. Davidson, Detroit, Stallion colt, 1 year old.
P. C. Livingston, Huron, "Shylock," 11 years old.
P. R. Carter, Jackson, "Glenco."

MARES.

James Beard, Port Huron, brood mare, 8 years old.
David Rider, Nankin, brood mare, 5 years old.
James Crawford, Romeo, brood mare and colt, for all work, 7 years old.
do do mare colt, 2 years old.
L. G. Crossman, Marengo, brood mare and colt, 9 years old.
D. M. Uhl, Ypsilanti, blood mare, 7 years old.
do do mare for all work, 4 years old.
do do blood mare colt, 1 year old.
do do blood mare, with foal at foot, 7 years old.
A. Knapp, Northville, brood mare for all work, 7 years old.
John Black, Dearborn, brood mare with foal at foot, 8 years old.
Robt. Percell, Schoolcraft, blood mare with foal at foot, 6 years old.
D. H. Scott, Lodi, mare, 7 years old.
G. C. Wheeler, Ypsilanti, brood mare, 5 years old.

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C. W. Green, Farmington, blood brood mare, with foal at foot, 12 y'rs old.
do do blood mare colt, 1 year old.
F. W. Backus, Detroit, brood mare, 6 years old.
do do blood mare, 4 years old.
G. O. Williams, Detroit, mare, 5 years old.
Asa H. Otis, Greenfield, brood mare, with foal at foot, 7 years old.
do do 2 mare colts, 1 year old.
John Nixson, Dowagiac, mare, 8 years old.
do do blood mare, 7 years old.
M. McNab, Detroit, brood mare, 8 years old.
do do mare, 3 years old.
Saml. Dunn, Jr., Plymouth, mare, 4 years old.
O. Bottsford, Farmington, brood mare, 6 years old.
George Chamberlin, Redford, brood mare, with foal at foot, 5 years old.
George Clark, Lapeer, " " " 10 "
J. Davidson, Detroit, brood mare, with foal at foot, 8 years old.
Thomas Clark, Lapeer, " " 12 "
P. R. Carter, Jackson, mare, 3 years old.

MATCHED AND SINGLE HORSES.

John Bryant, Greenfield, span matched horses, 7 years old.
Wm. Chart, Kalamazoo, span Morgan horses, 4 and 5 years old.
Brayton Flint, Novi, span matched horses, 4 years old.
J. A. Austin, Detroit, " " 5 "
Calvin A. Green, Avon, " "
Israel Welch, Ypsilanti, " " 4 "
H. Bennett, Buchanan, " " 5 "
C. Knapp, Novi, " " 5 "
D. H. Scott, Lodi, " " 5 & 6 "
James King, Troy, span draught horses, 5 and 6 years old.
J. B. Vanatta, Ann Arbor, span matched horses, 4 years old.
Lorain Andrews, Washington, " " 3 "
Wm. S. Martin, Ypsilanti, " " 6 "
S. J. Freeman, Borodino, " " 5 "
E. A. Platt, Ann Arbor, " " 5 "
do " " " 6 "
William White, Southfield, " " 5 "

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Grove Spencer, Ypsilanti, span matched Messenger horses, 3 years old.
Gideon Scott, Novi, span matched horses, 4 years old.

John A. Young, Southfield,	"	"	3	"
J. L. Rorison, Ypsilanti,	"	"	3	"
Wm. Riley, Pittsfield,	"	"	5	"
Silas Sly, Ypsilanti,	"	"	5	"
George A. Messer, Albion,	"	"	4	"
F. E. Eldred, Detroit,	one	horse,	9	"
B. Follett, Ypsilanti,	"	"	10	"
James Smith, Detroit,	"	"	4	"
E. M. Deforest, Ann Arbor,	"	"	5	"
G. Knapp, Albion,	"	"	5	"
E. Arnold, Dexter,	"	"	6	"
C. Yost, Ypsilanti,	"	"	8	"
D. M. Uhl, do	"	" colt,	1	"
Robt. Percell, Schoolcraft,	"	"	7	"
G. C. Wheeler, Ypsilanti,	"	"	5	"
John Starkweather, do	"	"	6	"
Isaac Scram, Grand Blanc,	"	"	8	"
F. W. Backus, Detroit,	"	"	6	"
L. Rowen, Spring Arbor,	"	"	6	"
B. B. Kercheval, Detroit,	"	"	8	"
E. A. Platt, Ann Arbor,	"	"	4	"
Wirt Dexter,	"	"	7	"
H. Compton, Ypsilanti,	"	"	6	"
Wm. Moore, Detroit,	"	"	8	"
J. C. Mervis, Northville,	"	"	3	"
John C. Williams, Detroit,	"	"	5	"
George P. Newberry, Romeo,	"	"	6	"
F. F. Parker, Detroit,	"	"	8	"
Erastus Wattles, Battle Creek,	"	"		
Wm. Johnson, Marshall,	"	"	4	"
Thomas Dougherty, Detroit,	"	one poney,	6	"
B. Sparling, do	Mexican	"	6	"

B. Dewey, Troy, span of horses for plowing match.

Titus Dort, Dearborn,	"	"
Alex. Wattles, Troy,	"	"
David Sloss, Dearborn,	"	"

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C. W. Green, Farmington, team for plowing.
James Forsyth, Dearborn, span horses for do.
E. Whittaker, Northville, do do.

JACKS AND MULES.

J. C. White, Detroit, Jenny, 5 years old.
D. C. Dean, Pontiac, Mule, 4 "
H. Gardner, Leoni, Spanish Jack, 8 years old.
A. Eastman, Spring Arbor, Mule, 4 "

FOREIGN HORSES.

Silas Hale, South Royalston, Mass., "Green Mountain," Morgan stallion, 18 years old.
Silas Hale, South Royalston, Mass., "Bay State," Morgan stallion, 6 years old.
Silas Hale, South Royalston, Mass., "Yankee Blade," Morgan stallion, 4 years old.
John P. Smith, Romlosville, N. Y., "Young Crocker," Eclipse stallion, 7 years old.
John P. Smith, Romlosville, N. Y., "Young Turk," stallion, 4 years old.
S. S. Halliday, West Cornwall, Vt., "Ethan Allen," Blood stallion, 5 years old.
D. C. Doane, Detroit, "Flying Cloud," Black Hawk stallion, 6 years old.
James Hunt, Malden, C. W., "Canadian Bay Boy," stallion, 4 years old.
Newton Wells, Mentor, Ohio, span matched horses, 7 years old.
J. F. Simpkins, Fremont, Ohio, " " 6 "

SHEEP.

Daniel Whitfield, Pontiac, 10 South Down bucks.
do do 10 " ewes.
do do 5 " lambs.
Ira H. Butterfield, Utica, 1 French Merino buck, 2 years old.
do do 5 " " lambs.
Payne K. Leech, do 5 " ewe "
do do 5 " buck "
C. W. Whitney, do 5 " ewe "
do do 5 Spanish Merino ewes
Joseph Tireman, Greenfield, 5 Leciester ewes, 1 year old.
do do 5 Grade buck lambs.
do do 5 " ewe "

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Joseph Tireman, Greenfield, 5 Grade ewes, 1 year old.
do do 5 Native " 3 "
do do 5 South Down ewes, 2 years old.
Wm. Ten Eyck, Dearborn, 2 Merino bucks, 3 and 4 years old.
do do 5 Grade Spanish Merino ewes, 3 years old.
Calvin A. Green, Avon, 5 ewes, cross of Fr. & Spanish, 2 "
do do 1 fat sheep, Native.
Benj. Peckham, Parma, 1 Spanish Merino buck, 6 years old.
do do 1 " " 2 "
do do 2 " " 1 "
do do 5 " " lambs, 4 months old.
do do 5 " ewe " 4 "
John K. Godfrey, do 5 Grade " buck "
F. M. Rowley, Chelsea, 1 " "
P. Latshaw, Erie, 1 Leicester buck, 3 years old.
J. P. Gillett, Manchester, 10 Saxon ewes, 2 "
do do 15 " " 1 "
do do 3 " bucks, 2 "
do do 2 " " 1 "
do do 5 " " lambs.
do do 5 " ewe "
S. D. Axford, Addison, 1 Leicester buck, 2 years old.
David Harrison, Nankin, 1 " " 5 "
John Brewer, Superior, 1 French Merino buck, 3 years old.
do do 1 " " 2 "
do do 5 " ewes, 4 "
do do 5 " " lambs.
do do 5 " buck "
David Brown, Detroit, 60 lambs, cross of Leicester and Merino.
William H. Lester, Utica, 5 Southdown ewes, 1 year old.
do do 5 " buck lambs.
do do 1 " " 3 years old.
do do 1 " " 1 "
Geo. Blumburgh, Royal Oak, 1 Saxon " 7 "
do do 2 cross Saxon & Merino bucks, 2 years old.

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O. W. & G. P. Bennett, Jacks'n, 5 Leicester ewes, 1 year old.
do do 1 " buck, 2 "
do do 1 " " lamb.
do do 1 " " 3 years old.
do do 3 Grade buck lambs.
Hiram Smith, Homer, 1 Silician buck, 3 years old.
do do 3 " " 1 "
do do 7 " " lambs.
do do 5 " ewes, 1 year old.
do do 5 " " lambs.
John Starkweather, Ypsilanti, 1 Spanish Merino buck, 5 years old.
do do 1 " " 2 "
do do 1 " " 1 "
do do 6 " ewes, 1 "
E. Stone, Erin, 5 Leicester buck lambs.
do do 5 " ewe "
do do 1 " buck, 2 years old.
do do 1 " " 1 "
do do 5 " ewes, 2 "
Nathan Earl, Plymouth, 2 " bucks, 2 "
do do 2 " " 1 "
do do 5 " buck lambs.
do do 5 " ewes, 2 years old.
do do 2 fat ewes.
do do 5 Native ewes, 2 years old.
L. J. Thompson, Spring Arbor, 1 cross of French and Spanish buck.
do do 2 French buck lambs.
do do 1 " ewe, 2 years old.
do do 4 cross of French and Spanish ewes.
Nathan Dickinson, Romeo, 5 Spanish ewes.
do do 5 French ewes.
George W. Gale, Ypsilanti, 5 Spanish ewes.
do do 5 French ewe lambs.
J. H. Benton, Port Huron, 1 French Merino buck lamb.
do do 5 " ewes, 2 and 3 years old.
do do 5 cross Fr. & Sp. " " "

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FOREIGN SHEEP.

Lansing K. Jenne,	Bethany, N. Y.,	4	Spanish Merino bucks,	2	years old.
do	do	10	" ewes,	2	"
do	do	1	Grade buck,	2	"
do	do	10	Spanish ewes,	1	"
L. Sharp,	Lockport, New York,	14	cross of Sp. & Fr. bucks,	2	yrs. old.
do	do	6	" " "		lambs.
do	do	9	Spanish ewes, 3 and 5 years old.		
M. D. Cornell,	White Creek, N. Y.,	12	" Merino bucks, 1, 2 & 3 yrs old.		
Thos. Bennett,	Raleigh, C. W.,	4	Leicester ewes, 2 years old.		
do	do	1	" buck, 3	"	
E. H. Gilbert,	Nunda, New York,	2	Spanish Merino bucks, 3 & 4 yrs old		
J. F. Brooks,	Lima, New York,	5	" " 1 & 5	"	
do	do	5	" " 1 & 5	"	
J. Stickney,	Shoreham, N. York,	15	" " 1 & 2	"	
do	do	1	" " 1	"	
do	do	1	Saxon buck,	1	"
do	do	1	Merino Grade buck,	1	"
W. B. Fisher,	Chatham, C. W.,	2	Leicester sheep.		
Robt. Smith,	do	5	" lambs.		
do	do	3	" bucks, 1 and 3 years old.		
John Johnson	Williston, Vermont,	2	French Merino bucks,	2	"
do	do	5	" ewes,	2	"
do	do	1	Spanish Merino buck,	3	"
L. W. Pease,	West Cornwall, Vt.,	1	French Merino "	3	"
do	do	1	" "	2	"
do	do	5	" ewes,	2	"
B. F. Bingham,	Cornwall, Vt.,	5	" "	3	"
do	do	4	" bucks,	1	"
do	do	10	Spanish Mernio ewes,	1	"
do	do	5	cross of Fr. & Sp. bucks,	1	"

SWINE.

Slade & Brother,	Detroit,	2	Suffolk pigs, 4 months old.		
M. Lightfoot,	do	1	Berkshire boar, 14 months old.		
do	do	1	" sow, 18	"	
do	do	1	" " 14	"	

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James Kelly, Napoleon, 1 Grade boar, 1 year old.
G. Knapp, Albion, 1 breeding sow, 2 years old.
E. K. Gilbert, Detroit, 1 Suffolk pig, 3 months old.
Wm. R. Roberts, Hamtramck, 1 cross of Berkshire & Byefield, 2 yrs old.
Thomas Hall, Detroit, 1 " " " pig.
F. W. Backus, Detroit, 1 Berkshire sow, 4 years old.
do do 1 " boar, 1 "
do do 1 lot " pigs.
do do 1 Grade sow, 2 years old.
do do 1 Berkshire sow and pigs.
E. H. Cressy, Troy, 1 Grade boar, 1 year old.
do do 1 " sow, 1 "
Asa H. Otis, Greenfield, 5 pigs cross of Blood.
do do 1 sow " " 2 years old.
H. Jubb, Detroit, 6 China hogs and pigs.
H. King, do 3 Native pigs, 10 months old.
Linus Foote, Kensington, 1 boar, cross of Byefield & Leic'r, 2 yrs old.
J. G. Crombie, Pontiac, 1 Suffolk boar, 2 years old.

FOREIGN SWINE.

Lansing K. Jenne, Bethany, N. York, 1 Leicester boar, 5 months old.
do do do 1 Suffolk sow, 4 "

POULTRY.

Francis Leslie, Dearborn, lot Dorking fowls.
do do " Guinea "
Stephen Smith, Detroit, " Seabright Bantam fowls.
Slade & Brother, Detroit, " Shanghai "
Benj. Peckham, Parma, 2 " "
J. W. Childs, Paint Creek, lot " "
do do " " chickens.
do do " cross " and Chittagong "
Lewis Childs, Augusta, " Shanghai chickens.
A. A. Gardner, Northville, " " and Cochin China "
Edwin Davis, Detroit, " white Bantam "
Calvin A. Green, Rochester, lot Grade fowls.

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M. Freeman, Schoolcraft, Lot buff Shanghai fowls.
do do " brown " "
do do " Dominico "
do do " white Shanghai and Chittagong fowls.
do do " black Cochin China "
do do " speckled " " and Dorking "
do do " Dorking "
do do " " and Shanghai "
do do " Seabright Bantam "
Francis Leslie, Dearborn, 3 geese.
A. T. McReynolds, Detroit, " Shanghai "
A. Hendry, do " Dorking "
do do " Chittagong "
do do " game and Dorking "
Prince Bennett, Ypsilanti, lot Shanghai fowls.
do do " black Poland "
E. H. Cressy, Troy, " speckled Dorking fowls.
do do " white Bantam fowls.
do do " cross of Shanghai and Dorking fowls
Francis Leslie, Dearborn, 3 Turkeys.
Wm. Cook, Detroit, " white Bantam fowls.
A. Stewart, Farmington, " game fowls.
Wm. Hudson, Hamtramck, " pea fowls.
do do " pearl Shanghai fowls.
do do " Seabright Bantam fowls.
do do " white Bantam fowls.
do do " speckled Shanghai fowls.
do do " cross of Shanghai and Cochin China f'l
do do " Chittagong fowls.
do do " free layer fowls.
do do " Aylsbury ducks.
do do " Rohen ducks.
C. W. Whitney, Shelby, " wild turkeys.
do do " white "
M. Freeman, Schoolcraft, pair of swans.
N. A. Prudden, Ann Arbor, " Chittagong fowls.
do do " Brahma Pootra fowls.
do do " Chittagong chickens.

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FOREIGN FOWLS.

M. VanDusen, Phelps, N. Y., lot Chittagong fowls.
L. K. Jenne, Bethany, do " Shanghai fowls.
do do " Cochin China fowls.
R. B. Gooding, Bristol, do " Cross of Brahma Pootra fowls.
do do " " white Shanghai fowls.
O. P. Kent, do " " brown and buff Shanghai fowls.
do do " " Cochin China fowls.
Ira Reynolds, do " " brown and buff Shanghai fowls.
do do " " Brahma Pootra fowls.
do do " " Cochin China fowls.
E. H. Gilbert, Nunda, lot white Shanghai fowls.
do do " cross of buff and brown Shanghai fowls.
S. S. McDonald, Windsor, C. W., lot Shanghai and Cochin China fowls.
Henry Bibb, do do " Cochin China fowls.
do do do " Shanghai "
do do do " cross Dorking and Malay fowls.

FARM IMPLEMENTS.

John Hanaford, Detroit, thrashing machine.
do do plow.
Walter Chester, Detroit, corn stalk and straw cutter.
J. T. Willson, Jackson, corn and cob crusher.
F. Danforth, Olivet, cutting box for cutting fodder.
P. Latshaw, Erie, steel plow.
T. A. Haviland, Ann Arbor, wheat drill.
John H. Rauch, Monroe, corn sheller.
D. R. Hoxie, Hillsdale, grass seed sower.
Joseph Dinnebake, Detroit, set of carriage harness.
D. O. & W. S. Penfield, Detroit, 1 fancy plow No 3; 1 plow each, No. 2, 3, 4, 5 and 6; 2 sub-soil plows; 1 bark and corn mill; 1 cast iron road scraper; 1 folding harrow; 1 corn and seed planter, for hand or horse power; 1 seed drill; 2 hay and corn stalk cutters; 1 sheep power for churn; 1 dog power for churn; 1 hydraulic ram; 1 horse rake; 2 hand corn shellers; 1 thermometric churn; 1 vegatable cutter; 1 sausage stuffer; 1 sausage meat cutter; 1 garden engine; 1 corn cultivator; 1 chain pump, rigged; 1 apple paring machine; 2 Hickock's portable cider mills, and cheese press combined; 1 Eagle

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plow each, Nos. 70, 71, 72, 73, 74, 75; 1 Emery & Co.'s two horse railroad power; 1 Emery & Co.'s thresher and separator; 1 Emery & Co.'s portable circular saw mill, for wood; 1 Emery & Co.'s one horse power.

R. E. Case, Three Rivers, 1 single harness.

J. M. McClellen, Detroit, 1 Michigan plow.

Thomas Flinn, Birmingham, Smith & Son's No. 3, Mich. single sod plow.
do do do " 1 (open furrow.)

T. A. Flower, Pontiac, 1 wheel cultivator.
do do 1 cultivator, each No. 1 and 2.

John Daines, Birmingham, drain tile.

John Hutchins, Southfield, 1 doz. twine tied brooms.

C. H. Bennett, Plymouth, portable cider mill.

Elliott Harrington, Northville, 1 double jointer plow.
do do 1 fallow plow.
do do 1 sod plow for stiff soil.

H. W. Ingersoll, Niles, 1 farm wagon.

J. S. Gay, Dowagiac, roller, clod crusher and drill, combined.

C. A. Crary, Columbia, 1 horse rake.

W. Burt & Son, Kalamazoo, Styles' patent straw cutter.

Platt Adams, Detroit, 1 gig harness.

A. H. Otis, Greenfield, 1 farm wagon and hay rigging.

Thos. W. Still, Almont, 1 bee hive.

Ferdinand Oxenfeld, Det., 1 farm wagon.

R. C. Simmons, Novi, 1 grain cradle.

W. Watkins, Detroit, 1 dray collar, 1 fine buggy collar.

Chas. Hager, Detroit, 1 buffalo wagon.

F. F. Parker & Bro., Detroit, 1 railway horse power; 1 thresher with separator; 1 thresher and winnower, combined; 1 wheat drill; 1 cheese press; 1 lap-furrow plow; 1 flat-furrow plow; 1 sub-soil plow; 1 breaking up plow; 1 corn sheller; 2 harrows; 1 clover huller; 1 cultivator; 1 stalk cutter, 1 thermometer churn; 1 vegetable cutter; 1 straw cutter; 1 corn planter; 1 seed planter.

D. P. Wilcox, Tompkins, apple paring machine.

E. Rockafellow, Davidsonville, 1 turkey wing plow.

Wlliams & Hackley, Bellville, N. Y., screw and lever cheese press.

Z. Sanders, Brownsville, Vt., horse rake.

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Chas. S. Chisholm, Dayton, Ohio, corn and seed planter for hills and drills.

U. D. Palmer, Jackson, Mich., 1 cheese press; 1 press for cider, lard and tallow; 1 press for paper, cloth, hay, hops, &c.

Shafer, Sweet & Co., Fort Brewnton, N. Y., dry land and under water excavator.

Willard Fisher, Brockport, N. Y., Seymour & Co.'s reaping machine.

John S. Wright, Chicago Ill., Atkin's automaton reaper and raker.

BUTTER, CHEESE, SUGAR AND HONEY.

Joris Wiedyk, Gross Point,	1 Dutch cheese.
William S. Higley, Lapeer,	2 pails maple sugar.
James Smith, Greenfield,	1 tub of butter.
do do	15 lbs. " in rolls.
Harvey Howard, Troy,	2 drawers honey, 10 lbs each.
E. L. Power, Livonia,	1 new cheese.
do do	1 sage cheese.
Henry Waldron, Pontiac,	15 lbs. butter in rolls.
do do	10 lbs. honey.
George R. Hurd, Monroe,	1 sage cheese.
A. L. Gilbert, Corunna,	10 lbs. maple sugar.
E. B. Spencer, Redford,	4 drawers honey.
do do	2 jars honey, made in the jars.
Wm. Lowes, Birmingham,	15 lbs. butter, made in June.
do do	10 lbs. maple sugar.
N. Lapham, Farmington,	1 old cheese, 48 lbs.
do do	1 sage "
do do	8 new "
Luther Lapham, do	2 old " 25 lbs.
do do	2 new "
Jas. H. Murray, do	3 old "
do do	18 new "
John Hutchins, Southfield,	10 lbs. maple sugar.
A. Streeter, Romeo,	1 firkin butter, made in June.
do do	1 crock " made in September.
do do	2 old cheese, 2 new do.
do do	2 sage "
S. Godfrey, Paw Paw,	1 glass box of honey.

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George Clark, Lapeer,	15 lbs. butter, made in September.
James Bailey, Troy,	10 "
Mrs. R. B. Hampton, Hickory Grove,	18 " made in June.
do do	10 " in rolls, made in Sept.
Mrs. Thos. Chisholm, Marshall,	15 " made in September.
do do	1 old cheese.
do do	1 new "
do do	1 sage "
John L Brownell, Farmington,	15 lbs. butter, made in September.
Mrs. J. L. Stout, Troy,	2 loaves bread, salt rising.
A. B. Markham, Plymouth,	1 crock butter, made in Sept.
do do	14 lbs butter in rolls.
A. Hallock, Livonia,	10 lbs. maple sugar.

DOMESTIC MANUFACTURES.

Francis Leslie, Dearborn, 1 pair woolen blankets, 1 lb. woolen yarn, 10 yards flannel, 1 pair woolen hose, 1 pair woolen socks, 1 pair knit cotton hose.

Eagle & Elliott, Detroit, 1 black dress coat.

John Mack, Romeo, 2 woolen coverlets, 2 pair woolen blankets, 2 woolen shawls, 20 yards tow cloth, 10 yards rag carpet, 10 yards satinett, 10 yards white flannel, 10 yards woolen cloth, 10 yards woolen plaid, 1 pair woolen socks, 1 pair woolen hose, 1 pair woolen mittens, 1 lb. woolen yarn.

Mrs. Ann Jones, Dearborn, 1 pair woolen blankets, 1 pair woolen hose, 1 pair cotton hose.

O. D. Swift, Detroit, 1 woolen coverlet.

John Gray, Dearborn, 1 pair woolen blankets.

George B. Pease, Detroit, 1 piece tapestry velvet carpeting, 1 piece coral pattern carpeting, 1 piece ingrain do., 1 piece ingrain forrest pattern do., 3 pieces oil cloth, 2 super. sheep skin rugs, 1 tapestry rug, 1 piece silk and worsted damask.

E. Brawdy, Detroit, 1 patch work quilt.

Augustus Day, do., 1 screw bedstead.

John Patton, do., 1 double carriage, 2 single buggies, 1 single buggy. (Hubbard's patent.)

Ladue & Eldred, Detroit, 6 sides sole leather, 6 sides harness leather, 6 sides bridle leather, 6 sides upper leather, 6 kip skins, 6 oak tanned

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calf skins, 6 hemlock tanned calf skins, 6 rolls leather belting, 1 open buggy.

Titus Dort, Dearborn, 10 yards woolen cloth.

Patrick Fitzgibbon, Detroit, 7 horse shoes.

William Tate, " 1 case hair work.

S. Perry, Armada, 3 woolen coverlets, 1 lamp mat, 2 pieces rag carpet, 1 lb. mixed woolen yarn, 1 lb. scarlet and white woolen yarn.

Sophia Warner, Armada, 3 pieces woolen carpets.

Mrs. J. E. Taylor, Pontiac, 1 patch work quilt.

" " 1 stitched quilt.

J. P. Gillet, Sharon, 10 yards rag carpet.

A. H. Hommel, Kalamazoo, 1 patch work quilt.

Mrs. J. J. Hendrickson, Detroit, 1 piece 12 yards dimity flannel.

Swift & Seymour, Detroit, 1 pair men's cow hide boots.

" " 1 " kip "

" " 1 " pegged calf "

" " 2 " sewed " "

Cyrus Hadsell, Pontiac, 2 pieces 20 yards rag carpet.

" " 1 pair knit cotton hose.

" " 1 " woolen socks.

Mrs. Isaac J. Voorhies, Waterford, 1 white quilt.

D. O. & W. S. Penfield, Detroit, 1 Stewart's large oven, cooking stove, and furniture.

Miss E. Miles, Detroit, 1 white bed spread.

A. McFarland, " 1 pair gents calf boots.

Martha Dyer, Jackson, 1 white bed spread.

A. E. Perkins & Co., Detroit, 1 mahogany chair.

" " lot cabinet ware.

Harriet M. Knapp, 1 pair woolen knit stockings.

" 1 pair woolen knit socks.

W. Lowes, Birmingham, 2 patch-work quilts.

" " 1 pair woolen stockings.

" " 1 " " socks.

" " 1 " " gloves.

Mrs E Sawyer, Grand Blanc, 1 pair fancy mittens.

Miss M. A. Sawyer, Grand Blanc, 1 patch-work quilt.

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Mrs. J. McLaughlin, Detroit, 1 silk patch-work quilt.
" " " 1 ottoman cover.
" " " 1 " "
McGregory & Bro., " 5 horse shoes.
" " " 5 sizes horse-shoe nails.
Mrs. J French, Adrian, 1 patch-work quilt.
Mrs. M. D. Hamilton, Detroit, 1 embroidered vest.
" " " 1 pair knit linen stockings.
Mrs. J. C. Holmes, Detroit, 1 silk patch-work quilt.
Mrs. J. L. Stout, Troy, 1 pair woolen mittens.
" " " 1 " " hose.
" " " 1 " " socks.
" " " 1 " " mittens.
F. Danforth, Westfield, New York, 1 model ox yoke.
J. Hutchins, Southfield, 10 yards white flannel.
" " 10 yards linen diaper.
" " 3 " " and cotton.
Mrs. J. Ferris, Ypsilanti, 2 hearth rugs.
A. Streeter, Romeo, 1 straw hat.
" " 1 " "
M. E. N. Howell, Pontiac, 1 pair woolen blankets.
W. Basou, Pittsfield, 1 wool coverlet.
" " 1 "
" " 1 pair woolen socks.
" " 1 pound woolen yarn.
Catharine McKim, Superior, 1 rug.
" " 1 pair linen stockings.
F. Leslie, Dearborn, 10 yards white flannel.
J. Giles, Novi Corners, 1 pair knit bed curtains.
Jane Mack, Romeo, 1 woolen shawl.
" " 1 pair woolen blankets.
" " 1 woolen coverlet.
Jane M. Burt, Kalamazoo, 1 white cotton bed quilt.
W. Y. Baker, Detroit, 1 single top carriage.
Nichols & Le Favour, Detroit, 3 pair sewed calf boots.
" " " 1 " single soled sewed calf boots.
" " " 2 " double " calf pegged boots.

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Nichols & LeFavour, Detroit, 1 pair single soled pegged cowhide boots.
" " " 1 " pegged grained leather "
" " " 3 " pegged cowhide "
" " " 1 " sewed calf Oxford ties.
" " " 1 " pegged " "
" " " 1 " sewed patent leather gaiters.
" " " 3 " women's pegged calf bootees.
" " " 2 " " sewed "
" " " 1 lot shoes in case.

Mrs. H. Vail, Ypsilanti, 1 pair white wool stockings.
" " 1 " " socks.

Susanna Johnson, Columbia, 1 patch work quilt.

Ladue & Eldred, Detroit, 6 sides sole leather.

T. Henly, Detroit, 6 horse shoes.

Susan Young, Southfield, 1 piece plaid flannel.

Martha Hewitt, Spring Arbor, 2 patch work quilts.

M. Osborne, Ann Arbor, 1 piece black cassimere.
" " 1 " brown "
" " 1 " grey "
" " 1 " white flannel.
" " 1 " cotton and wool.

L. Low, Redford, 1 rag hearth rug.

E. Stone, Erin, 2 rag carpets.

P. McTerney, Detroit, 1 dress coat.
" " 1 over "
" " 1 pair pants.
" " 1 vest.

F. Gaines, Detroit, 1 rag carpet.

Harriet West, Birmingham, 1 lamp mat.

Mrs. J. Bailey, Troy, 1 pair white wool stockings.

Mrs. W. H. Denison, Troy, 1 lb. white wool yarn.
" " 1 pair " stockings.
" " 1 " worsted "

Mrs. Getchell, Detroit, 2 rag hearth rugs.
" " 2 ottoman covers.

L. J. Thompson, Spring Arbor, 10 yards rag carpet.

Mrs. L. B. Walker, Detroit, 1 patch work quilt.

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Mrs. T. Chisholm, Marshall, 1 rag carpet.
L. Bennett, N. Haven, 2 patch work quilts.
L. L. Farnsworth, Detroit, 1 case ladies' shoes.
M. D. Hamilton, " 1 patch work quilt.
L. Chase, Rose, 1 piece full cloth.
" " 1 woolen shawl.
" " 1 lb. white stocking yarn.
" " 1 pair white wool stockings.
G. Tenbrook, Adrian, 1 pair woolen blankets.
J. Patten, Detroit, 1 two horse carriage.
O. M. Patton, Ann Arbor, 3 white quilts.
G. Winter, Detroit, 4 gents' silk hats.
" " 6 cloth and silk caps.
J. Davis, Plymouth, 1 rag carpet.
" " 1 pair worsted stockings.
A. Stewart, Farmington 1 single open buggy.
A. Fairfield, Livonia, 1 pair woolen socks.
Mrs. J. E. Brownell, Farmington, 1 patch work quilt.
F. Buhl & Co., Detroit, 2 black silk hats.
" " 6 cloth caps.
J. Cullen, Detroit, 1 buggy.
Charlotte Howard, Troy, 1 patch work quilt.
Mary Alf, Detroit, 2 " "
Mrs. J. F. Perrin, Nankin, 2 " "

PAINTINGS, DRAWINGS, DAGUERREOTYPES, NEEDLE-WORK, &C.

O. & A. Jordan, Detroit, 2 designs for a Gothic Cathedral.
" " " 2 drawings in water colors.
C. O. Lum, " 1 landscape in oil.
" " 1 oil painting, "Horse."
" " 1 pencil drawing, "Bull."
H. Blenman, " 1 painting in water colors, "Lions and Tigers."
W. R. Wheeler, Adrian, painting in oil colors, group of cattle.
F. E. Cohen, Detroit, " " portrait.
O. C. Thompson, " a crayon portrait.
W. R. Wheeler, Adrian, pencil drawing, "Bull."

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E. St. Alory, Detroit, 2 portraits, colored crayon.
" " 1 landscape, "
L. Davenport, " 1 portrait, "
Miss Janette T. Nixon, Detroit, 1 painting in water colors, bouquet of Flowers.
F. E. Cohen, Detroit, 1 oil painting, portrait.
" " 1 " "News Boy."
" " 1 " "J. C. Holmes reading the awards of premiums at the State Fair.
F. E. Cohen, Detroit, 1 oil painting, horse, mare and colt.
O. & A. Jordan, " 2 water color perspective drawings of the interior and exterior of Grace Church, Brooklyn Heights.
O. & A. Jordan, Detroit, 1 drawing, elevation in pencilling of a first class dwelling.
F. E. Edgerton, Oshkosh, Wisconsin, 1 pencil drawing, river and city.
John Goodison, Detroit, 1 landscape in oil, view near Almont, Michigan.
" " 1 " " Dove Dale, England.
" " 1 " " Loch Katharine, Scotland.
" " 1 painting in oil, fruit.
" " 2 paintings in water colors.
S. F. Mathers, Marshall, case of daguerreotypes.
G. E. Hall, Detroit, collection of "
Miss Thomas, Edwardsburgh, 1 piece painted and cut flowers.
Junius P. Dickinson, Ypsilanti, 2 monochromatic paintings.
F. E. Edgerton, Detroit, 1 pencil drawing, landscape.
Mrs. E. J. Wooley, " 1 worsted work picture of Dr. Franklin.
O. D. Moore, " collection of daguerreotypes.
Miss E. C. Darley, " 2 oil paintings, landscapes.
L. P. Dodge, " collection of daguerreotypes.
Miss E. Moller, " 2 pencil drawings.
N. M. Sutton, " collection of daguerreotypes.
M. Sutton, " collection of daguerreotypes.
Mrs. D. Larsalier, Adrian, water color painting, flowers.
O. & A. Jordan, Detroit, design of 2d Presbyterian Church on Fort street, Detroit.
O. & A. Jordan, " design of Jefferson Avenue Presbyterian Church, Detroit.

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O. & A. Jordan, Detroit, 2 water color drawings, in perspective, of hotels.
" " 1 perspective drawing in pencil, of hotel and grounds.
Mrs. S. Lemcke, " case of ornamental hair work.
" " 1 bouquet of bead work.
" " 1 " hair work.
Miss Elenor Moller, " embroidered landscape.
" " bell pull, Horn of Plenty.
" " satin bonnet.
Mrs. R. Chope, " 2 shell work boxes.
Miss Lucy Tasker, " collection of worsted work and knitting.
Miss Mary Brennan, " worsted work, scripture piece.
Miss C. J. Brady, " bouquet, worsted artificial flowers.
" " bread cover, crotchet work.
" " bead purse.
" " embroidered table cover.
" " raised worsted flowers on canvas.
" " flat worsted work on canvas, "Flower Girl."
Miss Sophia Filter, " 2 table cloths, and 1 tidy in crotchet work.
Mrs. M. L. Penfield, " 1 ottoman cover, worsted work.
Freedman & Bro., " 1 silk bonnet and a head dress.
Mrs. Gardner, Northville, 1 child's blanket shawl, embroidered with silk
Miss Caroline K. Sawyer, Grand Blanc, 1 embroidered collar.
" " " 1 " pocket hdkf.
" " " 1 " lace cape.
Miss Margaret Thompson, Detroit, worsted embroidery on camp chair.
" " " " " on ottoman.
Miss Frances M. Kent, Galesburgh, 1 crochet worked basket.
" " 1 " lamp mat.
Mrs. Kellard, Detroit, child's sack, embroidered with silk.
Mrs. P. R. Creise, Detroit, knotted trimmings.
Mrs. R. F. Johnstone, Detroit, 1 pair gent's slippers, embroidered with silk.
Mrs. Martha Wilson, Detroit, basket of fruit, wax work.
Mrs. Piquette & Sister, Detroit, 4 frames of worsted needle work.
Mrs. H. L. Whitney, Detroit, 2 embroidered pocket hdkfs.
" " 1 ornamental Morocco work box.
" " 1 " " needle box.

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Mrs. Jereh. Brown, Battle Creek, 1 specimen shell work.
Miss Sarah Jane Hudson, Detroit, 1 melon seed bag.
Mrs. C. McKim, Superior, 1 worsted work moss b: sket.
" " 2 " lamp mats.
Mrs. John Ferrier Ypsilanti, 2 tidies.
T. H. Armstroug, Detroit, 2 cases embroidered regalia.
Miss Wall, Detroit, model cottage.
" " embroidered group of flowers.
Mrs. L. F. Platt. Ypsilanti, 1 silk embroidered toilet cushion.
S. W. Patterson, " 1 pair ladies embroidered undersleeves.
" " 1 embroidered pocket hdkf.
Mrs. E. A. Tompkins, Detroit, 2 raised worsted embroidered ottoman covers.
Mrs. E. A. Tompkins, Detroit, 1 raised worsted embroidered stool cover.
Miss M. F. Elliott, Detroit, 1 French embroidered hdkf.
M. E. Bibb, Windsor, C. W., 2 pieces Grecian worsted work.
" " 1 " Cheneile work.
Mrs. Willson, Detroit, 2 knit chair tidies.
J. M. Ross, Saline, 1 piece raised work, embroidery, flowers.
Miss E. Baldwin, Detroit, 1 embroidered fire screen, female.
" " figure with a child.
Mrs. Searles, " 1 bouquet artificial flowers.
Mrs. Julia A. Buhl, Romeo, raised worsted work, lamp mat.
Mrs. John Atkinson, Detroit, 2 worsted embroidered ottomans.
" " 1 " " chair.
Miss Bertha Daniel, " 1 crochet bed cover.
" " " 1 chair cover, crochet work.
Mrs. L. B. Walker, " 1 linen embroidered bed cover.
Mrs. J. Starkweather, Ypsilanti, 1 pair French needlework cuffs, and three collars.
Mrs. H. T. Stringham, Detroit, 1 crochet chair doiley.
" " " 1 " counterpane.
M. Lightfoot, " 1 shell work box.
Mrs. A. G. Eastman, Adrian, 2 worsted work lamp mats.
" " " 1 embroidered silk apron.
Mrs. D. Grummond, Detroit, 1 worsted work lamp mat.
Miss O. M. Patton, Ann Arbor, 1 crochet tidy.

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Miss Lucina E. Flower, Pontiac, raised worsted work, lamp mat.
Miss Harriet Holder, Detroit, 3 patch work ottoman covers.
" " " 2 worsted work stool covers.
H. Woodruff, Brownstown, 2 ottoman covers—worsted work.
Mrs. Isaac French, Adrian, collection of paper and wax flowers.
Mrs. Geo. Doty, Detroit, 1 embroidered fire screen.
Miss Harriet E. Patton, Ann Arbor, 1 crochet work tidy.
Miss Margaret Glass, Detroit, 1 pair thread hose.
Mrs. Wm. Stewart, " 1 collar, undersleeves, handkerchief and chemisette.
Mrs. Fanny Bowerman, " 1 net counterpane.
" " " 3 pair net work socks.
Mrs. Mary Rossman, " needle work skirt.

FRUITS, FLOWERS AND VEGETABLES.

Daniel Cook, Jackson, apples: 8 varieties; early harvest, sweet bough, benoni, summer queen, niac pippin, American summer pearmain, golden sweet, spur sweet. Plums: 5 varieties; yellow egg, frost gage, blue gage, Duane's purple, Cruger's scarlet. Nectarines: 3 varieties; elruge, Boston, early violet.
Harvey Howard, Troy, 3 crook neck squashes, 2 drawers of honey.
" " 9 varieties of roots for cattle.
Emery O. Jones, " 1 peck flesh colored potatoes, 1 peck of table potatoes.
Peter Stanch, Detroit, 1 Isabella grape vine in a box.
" " 1 white sweet-water grape vine.
Miss Jane Mack, Romeo, 12 ears of Dutton corn.
J. C. Holmes, Detroit, pears: 32 varieties; Bezi d'Montigny, Bella Lucrative, Bleeker's Meadow, Beurre Chaptal, Beurre Diel, Beurre Burreal, Bezi d'la Motte, Buffum, Colmar d'Aremberg, Countess of Lunay, Charles of Austria, Chaumontelle, Canandaigua, Duchess d'Angouleme, Doyenne white, Doyenne gray, Eastern Bergamot, Flemish beauty, Fontarabie, Fig, Glout Morceau, Henry 4th, Jaminette, Louise Bonne d'Jersey, long green striped, Napoleon, new egg, pound, Passe Colmar, royal winter, Stevenses' Genesee, seckel. Grapes: 4 varieties; Clinton, Catawba, Diana, Isabella. Quinces. Peaches. Ohio everbearing raspberry. Water melons: mountain sprout, Long Island, black Spanish. Musk melons: Persian, early christiana, nutmeg.

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Autumnal marrow squash, English marrow. Old colony sweet corn. Mountain sweet peppers, Spanish sweet peppers; 4 varieties potatoes.

John Gray, Dearborn, 6 heads cabbage,

Francis Raymond, Detroit, 2 varieties foreign grapes,

" " Crawford's late melocoton peach.

Mrs. J. Palmer, Detroit, quinces, Catawba and Isabella grapes.

Mrs. E. Nethersted, " dish of peaches.

Hubbard & Davis, " 3 varieties melons, 1 peck tomatoes, ½ bush. flat turnips, sweet Spanish peppers, autumnal marrow squashes, Old colony sweet corn, Stowell's evergreen sweet corn, sweet potatoes, New Hampshire potatoes, yellow turnips, winter squashes, 4 bunches scarlet short top radish, Victoria rhubarb, collection of dahlias, cut flowers, 9 varieties pears, 10 varieties apples, dish orange quince, 10 varieties peaches, 3 varieties grapes.

J. Ford, Detroit, collection of vegatables.

" " 12 blood beets.
" " 6 heads cauliflower.
" " 6 " cabbage.
" " 12 stalks celery.
" " 6 vegetable eggs.
" " 1 peck onions.
" " 1 " yellow.
" " 1 " red.
" " 3 crook-neck squashes.
" " 1 peck tomatoes.
" " 12 roots salsify.
" " ½ peck Lima beans.
" " 6 stalks rhubarb.
" " 1 dish seedling grapes.
" " 3 doz. peaches, 3 varieties.
" " 3 " apples, 3 "
" " 1 " orange quinces.
" " 1 " " "
" " 2 " pears, 2 varieties.
" " 3 " red Siberian crab-apples.
" " 1 " mammoth tomatoes.
" " 1 parcel beets.
" " 1 " white carrots.

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W. B. Edson, Berrien Springs, 1 doz. long blood beets.
C. Fuller, Plymouth, 1 doz. quinces.
S. R. Hurd, Monroe, 2 bushels white beans.
" " 1 peck potatoes.
W. Smail, Detroit, 1 collection of flowers.
" " 1 " dahlias.
" " 12 dissimilar blooms.
" " 1 single dahlia.
" " 1 collection green-house plants.
" " 1 " vegatables.
" " 6 heads cauliflower.
" " 12 carrots.
" " 2 parsnips.
" " 12 stalks celery.
" " 12 roots salisfy.
" " ½ peck Lima beans.
" " 1 " sweet potatoes.
" " 4 nutmeg melons.
T. Christian, " 12 seedling peaches.
W. B. Edson, Berrien Springs, 1 bushel yellow corn.
E. R. Post, Detroit, 3 mammoth squashes.
" " 3 citrons.
" " 1 peck sweet potatoes.
S. Smith, " 5 Duchess d'Angouleme pears.
E. L. Powers, Livonia, 10 black seed onions.
H. Waldron, Pontiac, 1 peck peaches.
" " 1 " table potatoes.
" " 1 specimen autumn seedling apples.
C. Hadsell, Pontiac, 12 quinces.
P. Gallagher, Detroit, 3 squashes, 2 varieties.
C. S. Smith, Morpeth, C. W., 5 peaches.
E. Palmer, Plymouth, 1 peck quinces.
" " 1 bushel blood beets.
" " 2 squashes.
" " 1 collection Isabella grapes.
" " 1 " Catawba "

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A. Hallock, Livonia, 4 bushels apples, 4 varieties.
" " 1 specimen winter apples, 14 varieties.
" " 3 seedling winter apples.
" " 3 " table apples, 16 varieties.
" " 10 " peaches.
" " 1 peck seedling peaches.
" " 1 " potatoes.
F. Smith, Plymouth, ½ " Lima beans.
" " 1 " quinces.
J. Gray, Dearborn, 1 pumpkin.
A. Melvin, Detroit, 3 Flemish beauty pears.
" " 3 fall pears.
" " 3 tomatoes.
W. Young, " 21 apples, 7 varieties.
" " 3 pecks onions, 3 varieties.
D. M. Uhl, Ypsilanti, 12 ears white flint corn.
" " 12 " white corn.
L. Lapham, Farmington, 1 peck table potatoes.
G. Scott, Novi, 7 dozen apples, 7 varieties.
" " 1 " peaches.
D. B. Carpenter, Belleville, winter apples, 6 varieties.
T. Hopson, Detroit, 6 heads cabbages.
" " 4 coxcombs.
T. Lothrop, Adrian, 2 plates grapes.
" " 1 bunch sweet corn.
T. Hall, Detroit, 2 plates Isabella grapes.
" " 3 stalks celery.
" " 3 vegetable eggs.
" " ½ dozen blood beets.
" " ½ " carrots.
" " 2 heads pickled cabbages.
" " 3 varieties tomatoes.
M. I. Janes, Birmingham, 1 basket quinces.
J. Crabb, Detroit, 7 heads cabbage.
" " 7 vegetable eggs.
" " 12 early horro carrots.
" " 1 peck red onions.
" " 5 coxcomb flowers.

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Mrs. J. C. Holmes, Detroit, 1 basket flowers.
" " collection fruit and flowers.
Mrs. J. Brown, Battle Creek, 1 basket flowers.
" " 1 bouquet, (round.)
" " 1 " (flat.)
" " 1 " indigenous flowers.
" " 1 lot cut "
" " 1 " seedling peaches.
" " 1 peck "
" " 10 named varieties "
" " 1 stem asparagus.
J. L. Stewart, Troy, 1 peck quinces.
S. B. Noble, Ann Arbor, seedling peaches.
" "
A. Eames, Kalamazoo, ½ bushel winter apples.
A. Streeter, Romeo, 12 blood beets.
" 12 turnip rooted beets.
" 12 roots salsify.
" 13 crook-neck squashes.
A. T. McReynolds, Detroit, 1 plate of grapes.
" " pears.
" " quinces.
" 1 fall pippin.
" 1 pear.
" ½ bushel potatoes.
P. Bennett, Ypsilanti, 6 heads cabbage.
" 4 crook-neck squashes.
" 12 parsnips.
" 12 carrots.
" 1 peck white onions.
" " red "
Mrs. M. Norris, Ypsilanti, 2 bouquets, 110 var.
D. C. Dean, Pontiac, 6 peaches.
P. Bennett, Ypsilanti, winter apples, 18 var.
" fall " 3 "
" 12 quinces.
" 10 peaches.

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P. Bennett, Ypsilanti, 19 peaches.
" " "
" 1 peck peaches.
" ½ bushel apples.
" 1 peck quinces.
" 1 dish wild grapes.
L. Flint, Novi, 1 peck peach-blow table potatoes.
" " " deaconites, for seed.
C. C. Trowbridge, Detroit, 1 dish Catawba grapes,
" " " Isabella "
" " " Winne "
" " " Beaubien "
" " " peaches.
J. Smith, Detroit, " " golden pippins.
" " " seedling rareripe peaches.
" " " lemon peaches.
W. Balls, Detroit, 1 flat bouquet.
" " 1 bunch salsify.
" " 2 bunches dark blood beets.
" " 1 peck round smooth tomatoes.
" " " mammoth tomatoes.
" " 6 purple veg. eggs.
" " ½ peck Lima beans.
" " 3 Boston marrow squashes.
Charles Fox, Grosse Isle, 1 dish Crawford's late M. peaches.
J. Brown, Battle Creek, 12 varieties potatoes.
" " 1 single dahlia.
J. Skidmore, Nankin, 1 peck yellow black seed corn.
" " 1 " red " "
J. B. Vannetta, Ann Arbor, 10 Melacoton peaches.
" " 10 yellow peaches.
S. Bowerman, Detroit, apples, 106 varieties.
G. S. Frost, " 4 blood beets.
" " 3 cashew pumpkins.
F. Gaines, Detroit, 1 bush. Isabella grapes.
" " 1 basket "
" " 1 peck sweet potatoes.

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J. W. Prey, Three Rivers, 1 plate Isabella grapes.
H. Bradley, Northville, " "
T. Palmer, Detroit, " "
" " " black Prince grapes.
" " " early black July "
Wm. Adair, Detroit, collection dahlias.
" " 12 " distinct blooms.
" " " 1 single specimen.
" " 6 stalks rhubarb.
" " variety of pears.
" " Black Prince grapes.
" " 6 varieties phloxes.
" " collection verbenas.
H. A. Young, Detroit, 3 varieties pears.
E. G. Mixer & Co., Detroit, collection dahlias.
" " " roses.
" " " " 10 dissimilar blooms.
" " " phloxes.
" " " verbenas, 18 varieties.
" " " green house plants.
" " 1 floral design to memory, A. J. Downing.
" " 1 hand bouquet. (flat.)
" " 1 " (round.)
Mrs. Mixer, Detroit, 1 basket flowers.
" " "
Mrs. L. B. Walker, Detroit, collection indigenous flowers.
J. M. Sanford, Grass Lake, 19 plates winter apples.
" " 7 " fall apples.
" " 1 " seedling apples.
H. King, Detroit, 1 watermelon.
J. L. Lyell, " 3 yellow beets.
W. Tenbrook, Adrian, winter apples, 9 varieties.
" " fall " 4 "
" " 1 plate orange quinces.
" " 1 " apple quinces.
" " 1 " sweet winter grapes.
" " 1 " Isabella "

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E. Delamater, Columbia, 1 jar plums.
G. Tenbrook, Adrian, 2 bushels beans.
" " 1 peck table potatoes.
L. Baxter, Jonesville, ½ " large Lima beans.
" " ½ " early "
J. C. Williams, Detroit, apples, 18 varieties.
" " 1 plate seedling peaches.
" " 1 " Crawford's late peaches.
" " 1 peck Meshanick potatoes.
" " 1 " red onions.
" " 1 dozen Orange carrots.
B. Phelps, Pontiac, 12 quinces.
" " 1 plate pears.
D. B. Carpenter, Belleville, fall apples, 4 varieties.
" " 1 plate seedling apples.
" " 1 " summer "
Ladue & Eldred, Detroit, 6 mangel-wurtzel beets.
G. Frost, " 1 basket beets.
J. S. Bagg, " 1 peck tomatoes.
" " ½ " Lima beans.
" " 2 bushels yellow corn.
" " 2 " beans.
" " 3 crook-neck squashes.
" " 10 varieties table potatoes.
" " 12 carrots.
" " 12 turnip-rooted beets.
" " 1 peck onions.
" " 4 watermelons, 3 varieties.
" " 4 muskmelons.
" " 3 nutmeg melons, 2 varieties.
L. Foot, Kensington, 12 peaches.
E. C. Roberts, Summit, 1 peck peaches.
H. Walker, Detroit, 1 plate Flemish beans.
" " 1 " Vicar of Wakefield beans.
" " 1 " Leon Lecre "
" " 1 " white Dorgenne "
" " 1 dozen Orange quinces.

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J. R. Munroe, Paw Paw, 6 Seek-no-further apples.
" " 1 peck table potatoes.
F. G. Angell, Detroit, 1 peck sweet potatoes.
" " 10 vegetable eggs.
" " 1 floral design.
" " 40 varieties verbenas.
" " collection cut flowers.
" " " foreign grapes.
W. Fletcher, " 4 citron melons.
H. Woodruff, Brownstown, Isabella grapes.
L. P. Kneeland, Detroit, 2 vegetable marrow squashes.
A. Fairfield, Livonia, ½ bushel Pinkeye potatoes.
J. L. Browning, Farmington, 1 peck peaches.
" " 1 " quinces.
" " 1 basket flowers.
J. J. Crombie, Pontiac, 24 Melacoton peaches.
A. Fairfield, Livonia, 1 peck white potatoes.
J. Winder, Detroit, 12 quinces.
J. H. Bagg, Detroit, 1 plate Catawba grapes.
" " 1 " quinces.
" " 1 " Isabella grapes.
" " 1 " peaches.
W. Adair, " collection roses.
John Allen, Plymouth, 3 varieties apples.
" " lot pears.
N. Smith, Detroit, Morisania peaches.
J. W. Moore, Detroit, 1 watermelon.

GRAIN, FLOUR, SEEDS, BREAD, AND FIELD CROPS.

David Paddock, Pontiac, 1 bbl. flour.
John Gray, Dearborn, 2 loaves wheat bread, 1 loaf corn meal bread, 12 ears yellow corn.
A. Wattles, Troy, 12 ears yellow corn.
Norman Perry, Ray, 18 ears yellow corn.
D. D. Tooker, Napoleon, 4 bushels Australian wheat.
" " 1 sheaf " "
L. D. Owen, Romeo, specimen " "

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J. B. Springer, Livonia Centre, ½ bushel barley oats.
" " " ½ " yellow corn.
Mrs. E. Nedesdtatte, Detroit, 7 ears eight rowed yellow corn.
Henry Waldron, Pontiac, 2 bushels yellow corn.
" " 12 ears " "
" " 2 loaves salt rising bread.
Fred. Smith, Plymouth, 12 ears white dent corn.
" " 12 " 8 rowed yellow corn.
J. B. Vanatta, Ann Arbor, 2 bushels blue stem wheat.
" " 2 bushels Tuscany wheat.
" " 12 ears white dent corn.
W. C. Hughes, Milford, 1 bbl. flour.
L. Canfield, Redford, 3 varieties potatoes.
" " 12 ears dutton corn.
" " 3 crook neck squashes; lot corn.
" " 2 loaves bread, milk rising.
George Millard, Detroit, 3 bbls. flour.
John Kirk, Dearborn, 2 bushels wheat, 1 peck yellow onions.
Levi B. Shaw, Kalamazoo, 2 bushels white Brewster wheat.
E. N. Howel, Pontiac, 12 white carrots.
" " 12 orange "
" " 12 blood beets, 2 citrons.
" " ½ bushel potatoes.
" " 8 varieties potatoes, 6 specimens each.
" " 7 " roots for cattle.
" " 13 " culinary vegetables.
John Hutchins, Southville, 2 bushels white seed oats.
" " 12 ears yellow seed corn.
T. Hopson, Detroit, 2 dozen Gerkins.
Thos. Hurd, East Rockport, Ohio, 1 sample oats, 2 do wheat.
A. Streeter, Romeo, 2 bushels white beans.
" " 2 loaves milk rising bread.
" " 12 ears dent corn.
John Common, Erin, 2 bushels wheat.
" " sample dent corn.
" " " small 8 rowed yellow corn.
" " " flint corn.

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Prince Bennett, Ypsilanti, 2 bushels Marrowfat peas.
John Starkweather, Ypsilanti, 2 bushels white flint wheat.
John Kirk, Dearborn, 1 peck table potatoes.
Mrs. E. M. Sheldon, Detroit, 1 loaf wheat bread.
Lorin Flint, Novi, 2 bushels Virginia dent corn.
" " 12 ears " "
Saml. Hardenburgh, Nankin, 1 barrel flour.
H. Bradley, Northville, 1 sample yellow corn.
Thos. Chisholm, Marshall, 1 loaf salt rising bread.
Owens & Worden, Detroit, 1 loaf bread, bakers' yeast.
Wm. Tenbrook, Adrian, 1 dozen ears yellow dent corn.
G. Tenbrook, " 2 bushels barley.
" " 12 ears Hackberry corn.
" " 12 " Indiana "
John S. Bagg, Detroit, 12 ears yellow corn.
E. G. Mixer, " 18 " " "
Hiram Walker, " 24 " " Dutton corn.
John Starkweather, Ypsilanti, 5 acres Indian "
Jay R. Monroe, Paw Paw, 12 ears Ohio dent "
" " 12 " Virginia yellow dent corn.
" " 12 " white dent "
" " 12 " small 8 rowed "
" " 12 " white and yellow mixed corn.
Edward Wilson, Detroit, 11 " yellow corn.
Mrs. Amos Chaffee, Detroit, 1 loaf bread, domestic yeast.
Mrs. J. L. Stout, Troy, 2 loaves salt rising bread.

MISCELLANEOUS ARTICLES.

H. Canfield, Akron, Ohio, improved hand printing press.
Henry Miller, Detroit, specimens of fine cut chewing tobacco.
Charles Ross, Rochester, N. Y., Cone Burr Stone, flouring and feed mill, for farmer's use, to be operated with horse power.
W. Chester, agent, Detroit, fine cut chewing tobacco.
Wm. Wingert, " 1 target rifle with telescope.
" " 1 case fire arms.
" " 1 double barrel shot gun and case.
Augustus Day, " Lewis' screw cutters for bedsteads.

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Rufus Brown, Detroit, 2 bales vulcanized India rubber belting.
" " 2 coils " " cord.
" " 2 bunches " " packing.
" " 1 bunch " " ring "
" " 2 bales leather belting.
W. & A. Shultheis, " 1 marble mantle piece.
" " 1 gothic head stone.
" " 3 pieces statuary.
W. Fewins, " 1 lady's patent division ringlet, full dress wig.
Wm. Fewins, " 1 gent's knotted silk division wig, knotted with single hair.
Wm. Fewins, " 2 Tambour wigs, drawn through silk.
" " 1 gent's knotted parting wig, knotted with single hair on open lace.
Wm. Fewins, Detroit, 4 bottles Hair Invigorator.
E. R. Garrison, " 3 bottles burning fluid; 3 lamps for do.
Edwards, McKibbin & Co., Detroit, 3 marble mantle pieces.
" " 1 grate with register.
" " 1 silver mounted grate.
Mrs. D. L. Larzalier, Adrian, 1 embroidered piano spread.
" " 1 " ottoman cover.
John Farmer, Detroit, 1 engraved map of Michigan.
J. R. Grout, " 1 ingot of copper.
Aaron Pickett, Winneconne, Wis., Woolman's gate operator.
James Rankin, Detroit, collection of engine brasses.
Wm. Bostwick, " 1 fancy and cedar pine pail.
C. B. Turner, Marshall, 1 bbl. crackers.
E. & T. Fairbanks, St. Johnsbury, Vt., No. 1, iron hay scale; No. 1, iron rack and spring platform; No. 10, platform scale; Grocer's scale; Drugist scale; No. 1, even balance brass beam scale; No. 3, even balance brass beam scale.
Baxter & Gallagher, Detroit, 1 coil rope.
" " " 1 coil drepsea line.
" " " 2 doz. bed cords.
" " " 12 sash cords, broom twine, cotton line.

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C. & P. Mellus, Detroit, 2 mully mill saws.
" " 3 cross cut saws.
" " 3 circular "
" " 2 hand saws.
" " 1 back saw.
S. S. Barry, Cleveland, Ohio, 1 Avery's sewing machine.
Burt & Bailey, Detroit, 1 case mathematical instruments.
Nathan Stoddard, Adrian, 1 bottle electric oil.
A. Valentine, Detroit, 1 case jewelry.
D. O. & W. S. Penfield, Detroit, 1 portable forge.
W. M. Phillips, Detroit, 1 Benson's improved lightning rod and point.
Miss Caroline French, Detroit, 1 leather work bracket.
Mrs. J. Palmer, Detroit, 2 bottles currant wine.
Cabinet Makers' Association, Detroit, 1 rosewood working table.
" " " " 1 " dressing bureau.
C. King, Sterling, 1 curl maple and black walnut bureau.
R. L. Barrowman, Detroit, 1 case hats, caps, and furs.
" " 1 French hat conformateur.
Burgess & DeKay, Detroit, 1 box silver plated ware.
Detroit Melodeon Co., " 3 melodeons.
G. Schuler, " 1 French clock, glass case.
D. Kellogg, Saline, 1 combination mill.
C. Benoit, Detroit, 1 case finishing tools.
J. S. Vernor, " 1 Chilson's hot air vent. furnace.
" " 1 " metropolitan cooking range.
E. Kantar, " 1 dozen bed cords.
M. St. John, Kalamazoo, 3 specimens book binding.
J. L. Stout, Troy, 113 specimens wool.
Palmer & Whipple, Detroit, 3 bank ledgers.
C. Piquette, " 1 frame gold pens.
Baxter & Gallagher, " 5 dozen fish lines.
B. Lee, " 1 jar candy.
Stevens & Zug, " 1 metalic burial case.
E. H. Armstrong, " 1 case Masons and I. O. O. F. regalia and jewels.
S. Godfrey, Paw Paw, 1 bottle grape juice.

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O. S. Allen, Detroit, 1 cage Canaries.
D. French, " 1 barrel plaster.
" " 1 parcel plaster specimens.
W. T. Baker, " 1 horse hair matress.
H. Schlack, Ann Arbor, 2 barrels glue.
J. D. Bloss, Detroit, 3 marbleized iron mantels.
J. A. Young, Southfield, 1 stave jointer.
" " 1 hydrometer.
S. A. Gray, Jonesville, 1 linen shirt.
W. E. Peters, Detroit, 1 Italian marble head stone.
" " 1 American " "
" " 1 " " statute and table top stone.
" " 1 " " statue monument.
" " 1 wash-stand top.
" " 1 Italian wash stand.
C. A. Jeffries, Dexter, 1 sample foul meadow grass.
H. K. Messenger, Detroit, 1 made fire and water proof roof.
J. Thomas, Geneseo, Illinois, 1 rifle shooter.
T. Kenter, Detroit, 5 coils cordage.
" " 2 bundles fish lines.
" " 1 bundle wool twine.
Mrs. I French, Adrian, 1 pair fancy shoes.
Wm. Phelps & Bro., Detroit, 1 case confectionary.
P. Hamilton, " Arnold's patent sash lock.
Oliver Goldsmith, " 1 lot cigars and tobacco.
Austen & Van Houten, " 1 plaster paris centre-piece.
M. H. Webster, " 1 Otis's improved lightning conductor.
Guile & Allison, " 1 case gold pens.
J. H. Allison, " 1 pocket chronometer.
F. E. Eldred, " 2 brackets.
D. E. Rice, " 1 wood lathe.
" " 1 circular saw-arbor.
" " 1 hand drilling machine.
" " 1 copying press.
A. Gage, Adrian, 20 lbs. printer's ink.
J. M. & F. M. Martestein, Detroit, 1 bbl. glue.
S. D. Blood, Kalamazoo, 1 spring bed.

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J. P. Dickinson, Ypsilanti, 1 thrashing machine.
D. Wilkins, Newport, 1 bridge model.
Owens & Worden, Detroit, 4 boxes crackers.
G. Fisher, Kalamazoo, 1 shingle machine.
D. O. & W. S. Penfield, Detroit, 2 pair galv. pump tubes.
Atkins & Co., Detroit, 4 pier mirrors.
" " 2 pier tables.
" " 1 fancy stand.
" " 4 rows gilt borders.
" " 12 rolls paper hangings.
" " 4 gilt portrait frames.
Duryee & Forsyth, Roch., N. Y., 1 2,000 lbs. lever scale.
" " 1 1,200 lbs. portable "
" " 1 platform "
" " 1 60 lbs. counter "
" " 1 36 lbs. grocery "
" " 1 copying press.
" " 1 seal press.
" " 5 warehouse trucks.
" " 1 fire-king safe.
C. A. Crary, Columbia, 1 whippletree hook.
Mrs. I. Butterfield, Utica, bottle elderberry wine.
Wm. Cahoon, Pontiac, 1 case dentistry.
L. P. Leland, Detroit, 1 carpet stretcher.
D. T. Barrett, " 1 linen shirt.
" " 1 ruffle "
" " 2 plain "
Beecher, Rice & Ketchum, Detroit, 1 lounge.
" " " " 1 spring matress.
" " " " 1 hair "
Owens & Worden, Detroit, 1 box ship bread.
H. Walker " 1 bottle clarified cider vinegar.
Mrs. Walker, " 1 pan bread and biscuit.
G. Winter, " 2 fur overcoats.
" " 6 sets ladies' fur victorines.
" " 1 hat conformateur.
W. Fletcher, " 2 pair lasts.
H. J. Alvord, " quantity tobacco.

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Eliza Ingersoll, Farmington, 3 palm-leaf hats.
H. Whipple, Eagle Lake, 1 paring machine.
G. Clark, Monguagon, 14 varieties fresh fish.
Dr. Rudolph, Detroit, 1 cage French canary birds.
Mrs. M. C. Cunningham, Detroit, 1 muff and tippet.
Miss C. French, " 1 fancy bracket.
F. Buhl & Co., " 1 collection fur goods.
Burt & Bailey, " 1 transit.
" " 2 levels.
" " 1 solar compass.
N. Longworth, Cincinnati, Ohio, 4 bottles sparkling Catawba wine.
" " 2 " Isabella "
" " 2 " still Catawba "
" " 1 " sweet "
W. C. Hughes, Walford, 1 grease collar.

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REPORTS

OF THE VIEWING COMMITTEES—1853.

CATTLE.

CLASS I.—SHORT HORNS.

Your Committee on Cattle, Classes 1, 3, and 4, beg leave to report, that in making the following awards they have given particular attention to the manner of keeping, and the general treatment and management of the animals that came under their notice, so far as they were able to obtain the necessary information.

With regard to Hereford and Ayrshire cattle, we would state that we found no Ayrshires on the ground, and but one Hereford—a cow, which your Committee deemed unworthy a premium.

No. 56. Ira Phillips, Romeo, bull 5 years old and over, 1st premium, ... Silver Medal and $10 00

No. 75. George Graham, Lasalle, bull 5 years old and over, 2d premium 10 00

No. 101. M. A. Alton, Tecumseh, bull 5 years old and over, 3d premium 7 00

No. 90. Cyrus Fuller, Livonia, bull 3 years old and under 5, 1st premium ..... Silver Medal and 8 00

No. 118. D. M. Uhl, Ypsilanti, bull 3 years old and under 5, 2d premium 8 00

No. 46. J. A. Austin, Detroit, bull 3 years old and under 5, 3d premium 7 00

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No. 233. Samuel Blackwood, Novi, bull 2 years old, 3d prem., $7 00
73. Latshaw & Johnson, Erie, bull, 1 year old, 1st premium ..... Bronze Medal and 5 00
No. 16. Moses Allen, Plymouth, bull, 1 year old, 2d premium, 5 00
96. R. B. Gillesby, Tecumseh, bull, 1 year old, 3d prem., 4 00
57. Ira Phillips, Romeo, bull calf, 1st premium, Trans. and 5 00
50. Harvey Austin, Norville, bull calf, 2d premium 4 00
17. Moses Allen, Plymouth, " 3d " 3 00
59. John Starkweather, Ypsilanti, cow, 5 years old and over, 1st premium ..... Silver Medal and 8 00
No. 186. A. Y. Moore, Schoolcraft, cow, 5 years old and over, 2d premium 7 00
No. 28. Andrew Wilkie, Detroit, cow, 3 years old, 1st premium, ... Silver Medal and 8 00
No. 92. D. C. Blair, Tipton, cow, 3 years old, 2d premium 7 00
2. Ira H. Butterfield, Utica, cow, 3 years old, 3d premium, 6 00
No. 49. Harvey Austin, Norville, heifer, 2 years old, 1st premium, ... Bronze Medal and $5 00
No. 76. George Graham, Lasalle, heifer, 1 year old, 1st premium, ... Transactions and 5 00
No. 77. George Graham, Lasalle, heifer, one year old, 2d premium, ... 4 00
No. 93. D. C. Blair, Tipton, 1 heifer, 1 year old, 3d premium, 3 00

J. H. BUTTON,
GEORGE CLARK,
Committee.

CLASS II.—DEVONS.

The Committee on Devon Cattle, report the following awards:

No. 23. J. R. Grosvenor, Monroe, bull, 5 years old or over, 1st premium, ... Silver Medal and $10 00
No. 33. Riley C. Cone, Troy, bull, 5 years old or over, 2d premium, ... 10 00
No. 135. W. H. Miller, Moscow, bull, 5 years old or over, 3d premium, ... 7 00
No. 283. F. V. Smith, Coldwater, bull, 3 years old, 1st premium, ... Silver Medal and 8 00

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No. 65. J. W. Childs, Paint Creek, bull, 3 years old, 2d premium, ... $8 00

No. 194. O. W. & G. P. Bennett, Jackson, bull, 3 years old, 3d premium, ... 7 00

No. 287. F. V. Smith, Coldwater, bull calf, 1st premium, Transactions and 5 00

No. 83. Charles Ransom, Kalamazoo, bull calf, 2d premium, .. 4 00

No. 197. O. W. & G. P. Bennett, Jackson, bull calf, 3d premium, ... 3 00

No. 74. Latshaw & Johnson, Erie, cow, 5 years old, 1st premium, ... Silver Medal and 8 00

No. 286. F. V. Smith, Coldwater, cow, 5 years old, 2d premium, ... 7 00

No. 195. O. W. & G. P. Bennett, Jackson, cow, 5 years old, 3d premium, ... 6 00

No. 284. F. V. Smith, Coldwater, cow, 3 years old, 1st premium, ... Silver Medal and 8 00

No. 196. O. W. & G. P. Bennett, Jackson, heifer, 1 year old, 1st premium, ... Transactions and 5 00

No. 67. J. W. Childs, Paint Creek, heifer, 1 year old, 2d premium, ... 4 00

No. 84. Charles Ransom, Kalamazoo, heifer calf, 1st premium, 5 00

No. 288. F. V. Smith, Coldwater, heifer calf, 2d premium, ... 4 00

No. 290. " " " 3d " ... 3 00

S. M. BARTLETT,
ISAAC ASKEW,
L. OLMSTEAD,
L. D. CRIPPEN,
Committee.

CLASS V.—CROSS OF BLOOD. CLASS VII.—NATIVE.

The Committee on Class 5, Cross of Blood, and Class 7, Native Cattle, make the following report:

No. 58. Wm. Canfield, Mt. Clemens, bull, 3 years old, 1st premium, ... Silver Medal and $8 00

No. 302. L. F. Olmstead, Sturgis, bull, 3 years old, 2d premium, 8 00

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No. 106. Wm. Gass, Ray, bull, 3 years old, 3d premium, ... $7 00
No. 100. E. P. Bryan, Marengo, bull, 2 years old, 1st premium, ... Silver Medal and 8 00
No. 107. L. D. Owen, Romeo, bull, 2 years old, 2d premium, .. 7 00
No. 78. Oliver Hampton, Hickory Grove, bull, 1 year old, 1st premium, ... Bronze Medal and 5 00
No. 279. Roswell Waterman, Ann Arbor, bull, 1 year old, 2d premium, ... 5 00
No. 271. John W. Collins, Farmington, bull calf, 1st premium, ... Transactions and 5 00
No. 191. A. Y. Moore, Schoolcraft, bull calf, 2d premium, ... 4 00
No. 3. Ira H. Butterfield, Utica, " 3d " 3 00
No. 177. Justin Kellogg, Ypsilanti, cow, 3 years old, 1st premium, ... Silver Medal and 8 00
No. 97. J. B. Ames, Dexter, cow, 3 years old and under 5, 2d premium, ... 8 00
No. 270. John W. Collins, Farmington, cow, 3 years old and under 5, 3d premium, ... 6 00
No. 187. A. Y. Moore, Schoolcraft, cow, 5 years old and over, 1st premium, ... Silver Medal and 8 00
No. 98. J. B. Ames, Dexter, heifer, 2 years old, 1st premium, ... Bronze Medal and 5 00
No. 108. L. D. Owen, Romeo, heifer, 2 years old, 2d premium, 4 00
No. 188. A. Y. Moore, Schoolcraft, heifer, 2 years old, 3d premium, ... 3 00
No. 79. Oliver Hampton, Hickory Grove, heifer, 1 year old, 2d premium, ... 4 00
No. 272. John W. Collins, Farmington, heifer calf, 1st premium, 5 00
No. 178. Justin Kellogg, Ypsilanti, " 2d " 4 00
No. 190. A. Y. Moore, Schoolcraft, " 3d " 3 00
No. 311. William Moore, Detroit, Native cow, 5 years old and over, 1st premium, ... 8 00
No. 37. James Smith, Detroit, Native cow, 5 years old and over, 2d premium, ... 7 00
No. 273. John W. Collins, Farmington, Native cow, 5 years old and over, 3d premium, ... 6 00

GEO. E. POMEROY,
Chairman.

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CLASS VI.—CROSS BETWEEN BLOOD AND NATIVE.

Report of Committee on cross between Blood and Native, Class 6:

No. 276. L. H. Hubbard, Mount Clemens, Grade bull, 3 years old and under 5, ... Diploma.

No. 105. Robert Hamilton, Bruce, Grade bull, 2 years old, 1st prem., ... Silver Medal and 8 00

No. 258. O. Botsford, Farmington, Grade bull, 2 years old, 2d prem., ... 8 00

No. 294. C. G. Wheeler, Ypsilanti, Grade bull, 3 years old, 3d prem., ... 7 00

No. 257, Leonard Lee, Armada, Grade bull, 1 year old, 1st prem., ... Bronze Medal and 5 00

No. 110. Z. L. Eaton, Superior, Grade bull, 1 year old, 2d prem., ... 5 00

No. 99. E. L. Powell, Livonia, Grade bull, 1 year old, 3d prem., 5 00

No. 43. Calvin A. Green, Avon, Grade calf, 1st prem., Transactions and 5 00

No. 216. J. L. Stout, Troy, Grade calf, 2d prem., ... 4 00

No. 199. O. W. & G. P. Bennett, Jackson, Grade calf, 3d prem., 3 00

No. 120. D. M. Uhl, Ypsilanti, cow 5 years old, 1st prem., Silver Medal and 8 00

No. 119. D. M. Uhl, Ypsilanti, cow, 5 years old and over, 2d premium, ... 7 00

No. 36. James Smith, Detroit, cow, 5 years old, 3d premium, 6 00

No. 121. D. M. Uhl, Ypsilanti, cow, 3 years old and under 5, 1st premium, ... Silver Medal and 8 00

No. 53. S. A. Randall, Norville, cow, 3 years old, 2d premium, 7 00

No. 55. James B. St. John, Romeo, heifer, 2 years old, 1st premium, ... Bronze Medal and 5 00

No. 198. O. W. & G. P. Bennett, Jackson, heifer, 2 years old, 2d prem., ... 4 00

No. 122. D. M. Uhl, Ypsilanti, heifer, 1 year old, 1st premium, ... Transactions and 5 00

No. 123. " " " " " old, 2d prem., ... 4 00

No. 215. J. L. Stout, Troy, heifer 1 year old, 3d prem., ... 3 00

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No. 124. D. M. Uhl, Ypsilanti, heifer and calf, 1st prem.,.... $5 00
No. 125. " " " " 2d prem.,..... 4 00
No. 40. Nathan Davis, Troy, " " 3d prem.,..... 3 00

D. NICHOLS,
G. W. COLLINS,
JAMES B. ST. JOHN.
Committee.

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CLASSES VIII & IX.—WORKING OXEN AND CATTLE.

Report of Examining Committee, at the Society's Fifth Annual Fair, September 28th, 29th, and 30th, 1853:

We the undersigned, Viewing Committee on Working Cattle and Steers, beg leave to submit to the Executive Committee of the Fifth Annual Fair of the Michigan State Agricultural Society, the following report. The certificate on trained cattle, to which we awarded the premium, is hereunto annexed.

We deem the report sufficiently full and complete:

No. 309. Trained Steers—Broke by Orlando Avery. When first yoked, they were put behind a pair of oxen, but did not allow the oxen to pull upon them, and used until they could be controlled somewhat by the whip. They were then driven in the yoke until they would mind; then they were unyoked and driven single until they were perfectly handy. When driven in the yoke they were changed on either side, to make them handy to work either way. One of the steers was broke last November; it took four days to break him. The other was broke last week; it took four days. The one broke last, had been yoked a few times, but it had been of no service in breaking him.

I certify that the above statement is true.

F. V. SMITH.

No. 211. C. W. Green, Farmington, working oxen, 4 years old,
1st prem., ... Silver Medal and $10 00
No. 88. E. M. DeForest, Ann Arbor, working oxen, 4 years old,
2d prem.,..... 10 00
No. 208. L. B. Shaw, Kalamazoo, working oxen, 3 years old,
3d prem.,..... 8 00

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No. 269. John W. Collins, Farmington, working oxen, 8 years old, 1st prem., ... Bronze Medal, and $10 00
No. 241. J. B. Monroe, Paw Paw, working oxen, 8 years old, 2d prem., ... 10 00
No. 228. G. Chamberlain, Redford, steers, 3 years old, 1st premium, ... Farmers' Companion, and 10 00
No. 291. F. V. Smith, Coldwater, steers, 3 years old 2d premium, ... Farmers' Companion, and 5 00
No. 309. F. V. Smith, Coldwater, trained cattle, 1st prem., 10 00
No. 63. John Starkweather, Ypsilanti, pair steers, 2 years old, 1st prem., ... 6 00
No. 52. S. A. Randall, Norville, pair steers, 2 years old, 2d premium, ... 4 00
No. 50. A. L. Gilbert, Corunna, pair steers, 1 year old, 1st premium, ... 5 00

GEORGE RIX,
HENRY V. D. BOGART,
JOHN SINCLAIR,
Committee.

CLASSES X, XI AND XII.—FAT CATTLE AND MILCH COWS.

The Committee on Fat Cattle and Milch Cows, beg leave to report, that they have performed the duties assigned them, and say that there was no competition on the stall fed, but they deem the awards worthy the following report, which we respectfully submit to the Executive Committee:

No. 134. James Taylor, Kalamazoo, stall fed ox, 1st premium, $5 00
No. 64. John Starkweather, Ypsilanti, grass fed ox, 1st premium, 5 00
No. 236. John Sly, Plymouth, pair grass fed oxen, 1st premium, 10 00
No. 225. Charles Lee, Detroit, milch cow, 1st prem., Medal and 8 00
No. 37. James Smith, " " 2d " 8 00
No. 311. Wm. Moore, " " 3d " 6 00

D. THOMPSON,
S. MULHOLLAND,
S. G. PATTISON,
Committee.

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CLASS XIII.—FOREIGN CATTLE.

The Committee on Foreign Stock, beg to report twenty-two from out of the State, and six head owned in Michigan, as competing for premiums. Of these, by far the largest portion were Durhams; there was only one Devon, and no Ayrshire or Herefords. Many of the Durhams were very fine specimens of the breed, and though generally in fine condition, were evidently not made up for exhibition.

Your Committee had great difficulty in deciding which Durham cow was the best out of the three, so nearly alike in appearance and good qualities. It was with great hesitation that any decision was arrived at, and the one finally determined on was not that which would best please a superficial observer. It is only regretted that a premium could not be given to each. The same may also be said of three bulls and two bull calves. There was great general excellency throughout the department.

Your Committee would further state, that they have found unusual difficulty in consequence of the Michigan stock, competing with foreign, being separated and at a distance from them; and beg to recommend that another year they should stand in the same compartments. We would willingly have noticed other articles with favor, had premiums been offered for them.

There is no premium for Cross Bloods, but we would recommend that one be given to the Cross Blood bull hereafter mentioned, as a fine specimen of the class; at the same time we would not wish to be understood as recommending bulls of this character, however valuable cows or steers of Cross Bloods may occasionally prove. We believe it to be to the advantage of breeders to keep the bulls pure and distinct of any admixture:

No. 56. Ira Phillips, Romeo, bull, short horn, 3 years old and over, 1st premium, ... Diploma and $10 00

No. 30. S. P. Seward, Richmond, bull, short horn, 2 years old and over, 1st premium, ... 5 00

No. 73. Latshaw & Johnson, Erie, bull, short horn, 1 year old and over, 1st premium, ... 5 00

No. 60. John Starkweather, Ypsilanti, bull calf, 1st premium, 5 00

No. 142. M. L. Brooks, Northville, cow, short horn, 3 years old and over, 1st premium, ... Diploma and 10 00

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No. 144. M. S. Brooks, Northville, heifer, 2 years old, 1st prem., $5 00
No. 145. " " " 1 " " 1st prem., 5 00
No. 164. Spencer Peel, Anderdon, C. W., calf, 1st prem., 5 00
No. 74. Latshaw & Johnson, Erie, Devon cow, 3 years old and over, 1st prem., Diploma and 10 00
No. 167. William Sanford, Gossfield, C. W., Cross Blood, over 1 year old, 1st premium recommended, and 5 00

CHARLES FOX,
E. T. CHESTER,
Committee.

HORSES.

CLASS I.—HORSES FOR ALL WORK.

The Committee on Horses, for all work, would respectfully report, that they had to pass over the examination of the stock in much haste, as the ground was not ready until half-past 4 o'clock in the afternoon of the 29th. The stock of Stallions was very fine, and many very excellent horses, had, for want of time, to be passed without proper notice; and many presented horses, which were not presented in their proper place. We beg leave to submit the following list, to which we awarded premiums, as follows:

No. 140. W. R. Tayer, Adrian, Morgan stallion, 6 years old, 1st prem., Silver Medal and $10 00
No. 217. D. F. Hendricks, Marshall, Morgan stallion, 6 years old, 2d prem., Transactions and 10 00
No. 203. S. D. Blood, Kalamazoo, Sherman stallion, 6 years old, 3d prem., Youatt on the Horse and 5 00
No. 133. Joel T. Griffin, Clarkston, stallion, 3 years old, 1st prem., Bronze Medal and 10 00
No. 307. J. R. Goodrich, Pinckney, stallion, 3 years old, 2d prem., 7 00
No. 277. Chester Reynolds, Southfield, stallion, 3 years old, 3d prem., 5 00
No. 131. Robert Milliken, Almont, stallion, 2 years old, 1st prem., 10 00

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No. 138. A. Knapp, Northville, stallion Duroc, 1 year old, 2d prem., ... $6 00

No. 69. James Crawford, Romeo, mare, with foal at foot, 7 years old, 1st prem., ...Silver Medal and 10 00

No. 274. G. Clark, Lapeer, mare, 10 years old, 2d prem., Trans. and 10 00

No. 314. Thos. Clark, Lapeer, mare, 6 years old, 3d premium, ...Trans. and 5 00

No. 274. J. C. Movius, Northville, colt, 3 years old, 1st premium, ...Bronze Medal and 8 00

No. 249. William McNabb, Detroit, colt, 3 years old, 2d premium, ...Transactions and 6 00

No. 70. James Crawford, Romeo, mare, with colt 2 years old, 1st premium, ...Transactions and 5 00

Geo. Clark, Lapeer, mare, with colt 1 year old, 1st prem., Transactions and 5 00

E. J. WHITE,
GEO. H. ST. JOHN,
WILLIAM JOHNSON,
Committee.

CLASSES II AND V.—DRAUGHT HORSES, JACKS, AND MULES.

The Committee on Draught Horses, Jacks, and Mules, would state that the following horses were so nearly matched that your committee were equally divided in estimating their merits; consequently they chose a gentleman from the committee on blood horses to decide the matter. The horses above referred to, were No.s 139 and 241. There was no competition against No.s 303 and 132, yet your committee think them both worthy of first premiums:

No. 139. James A. Marshall, Adrian, stallion, 4 years old and over, 1st premium, ...Silver Medal and $10 00

No. 241. Asa H. Otis, Greenfield, stallion, 4 years old and over, 2d premium, ... 8 00

No. 201. J. Fannahill, Kalamazoo, stallion, 4 years old and over, 3d premium, ...Youatt and 3 00

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No. 303. J. Davidson, Detroit, Blood mare, 1st premium, Medal and $10 00

No. 132. Thomas Morton, Almont, stallion, 2 years old, 1st premium, ... 3 00

No. 304. J. Davidson, Detroit, stallion, 1 year old, 1st premium, 3 00

No. 246. H. Gardner, Leoni, Spanish Jack, 8 years old, 2d premium, ... 5 00

ANDREW GAGE,
PETER HARWICK,
J. SHEARER,
TOBIAS PRICE,
Committee.

CLASS III.—BLOOD HORSES.

The Committee on Blood Horses, beg leave to make the following report:

No. 41. Calvin A. Green, Avon, Blood stallion, 4 years old, 1st premium, ... $10 00

No. 8. B. Dewey, Troy, Blood stallion, 4 years old, 2d premium, ... Transactions and 10 00

No. 185. A. Y. Moore, Schoolcraft, Blood stallion, 4 years old, 3d premium, ... 5 00

No. 317. P. R. Carter, Jackson, brood mare, 3 years old, 1st premium, ... Bronze Medal and 10 00

No. 209. C. W. Green, Farmington, brood mare, 4 years old, 1st premium, ... Medal and 10 00

No. 130. D. M. Uhl, Ypsilanti, brood mare, 4 years old, 2d premium, ... Transactions and 10 00

No. 170. Robert Percell, Schoolcraft, brood mare, 4 years old, 3d premium, ... Youatt and 5 00

No. 318. P. R. Carter, Jackson, brood mare, 3 years old, 1st premium, ... Bronze Medal and 8 00

No. 175. George Smith, Saline, stallion, 1 year old, 1st premium, ... Transactions and 6 00

No. 128. D. M. Uhl, Ypsilanti, mare, 1 year old, 1st premium, Transactions and 6 00

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No. 4. Silas Hale, South Royalton, Mass., stallion, (foreign,) 1st premium, ... Silver Medal and $10 00

No. 166. S. S. Halliday, West Cornwall, stallion, (foreign,) 2d premium, ... Transactions and 10 00

No. 5. Silas Hale, South Royalton, Mass., stallion, (foreign,) 3d premium, ... 5 00

J. D. VAN HOVENBURGH,
THOMAS F. GALE,
B. W. PHILLIPS,
Committee.

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CLASS IV.—MATCHED AND SINGLE HORSES.

The Committee on Matched and Single Horses, beg leave to submit the following report to the Executive Committee:

No. 181. James B. Vanatta, Ann Arbor, span matched, 4 years old, 1st premium, ... Silver Medal and $10 00

No. 207. Wm. R. Martin, Ypsilanti, span matched, 6 years old, 2d premium, ... Bronze Medal and 10 00

No. 310. Geo. A. Mapes, Albion, span matched, 4 years old, 3d premium, ... Transactions and 10 00

No. 13. Wm. Chart, Kalamazoo, span matched, 4 and 5 years old, 4th premium, ... 8 00

No. 263. Grove Spencer, Ypsilanti, span colts, 3 years old, 1st premium, ... 10 00

No. 206. Lorain Andrews, Washington, span colts, 3 years old, 2d premium, ... 8 00

No. 267. J. L. Robinson, Ypsilanti, span colts, 3 years old, 3d premium, ... 6 00

No. 34. Erastus Wattles, Battle Creek, single horse, 4 years old, 1st premium, ... Silver Medal and 5 00

No. 171. Robert Percell, Schoolcraft, single horse, 7 years old, 2d premium, ... Youatt and 5 00

No. 192. John Starkweather, Ypsilanti, single horse, 6 years old, 3d premium, ... 5 00

No. 262. H. Compton, Ypsilanti, single horse, 6 years old, 4th premium, ... 3 00

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No. 220. F. W. Backus, Detroit, single horse, 6 years old,...Diploma.

GEO. W. MOORE,
A. WATTLES,
HORACE CHURCH,
Committee.

SHEEP.

CLASSES I. & II.—LONG WOOLED AND THEIR GRADES, MIDDLE WOOLED AND THEIR GRADES.

Report of the Committee on Sheep, made at the Fifth Annual Fair of the Michigan State Agricultural Society, held at Detroit, on the 28th, 29th, and 30th days of September, 1853.

Your Committee on Long Wooled Sheep, and their grades, and Middle Wooled and their grades, beg leave to submit the following awards of premiums, as their report:

No. 61. P. Latshaw, Erie, Leicester buck, 2 years old, and over, 1st prem., ... Silver Medal and $5 00

No. 198. O. W. & G. P. Bennett, Jackson, Leicester buck, 2 years old, 2d prem., ... Transactions and 5 00

No. 91. Daniel Harrison, Nankin, Leicester buck, 3 years old, 3d prem., ... 3 00

No. 159. Nathan Earle, Plymouth, Leicester buck, 1 year old, 1st prem., ... 5 00

No. 159. Nathan Earle, Plymouth, Leicester buck, 1 year old, 2d prem., ... 3 00

No. 161. Nathan Earle, Plymouth, 5 Leicester ewes, 2 years old, 1st prem., ... Silver Medal and 5 00

No. 153. E. Stone, Erin, 5 Leicester ewes, 2d prem., ... 5 00

No. 107. O. W. & G. P. Bennett, Jackson, 5 Leicester ewes, 1 year old, 1st prem., ... 5 00

No. 17. Joseph Tireman, Greenfield, 5 Leicester ewes, 2d prem., 5 00

No. 19. " " " 5 buck lambs, 1st premium, 5 00

No. 160. Nathan Earle, Plymouth, 5 " " 2d premium, 4 00

No. 149. E. Stone, Erin, " 5 " " 3d premium, 3 00

No. 86. David Brown, Detroit, 5 ewe lambs, 1st premium, 5 00

No. 18. Joseph Tireman, Greenfield, 5 " " 2d premium, 4 00

No. 150. E. Stone, Erin, 5 " " 3d premium, 3 00

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No. 9. Daniel Whitfield, Pontiac, 5 middle wooled bucks, 2 years old and over, 1st prem., ... Silver Medal and $5 00

No. 9. Daniel Whitfield, Pontiac, 5 middle wooled bucks, 2 years old and over, 2d prem., ... Transactions and 5 00

No. 94. Wm. H. Lester, Utica, 5 middle wooled bucks, 2 years old and over, 3d prem., ... 3 00

No. 95. Wm. H. Lester, Utica, 5 middle wooled bucks, 1 year old and over, 1st prem., ... 5 00

No. 6. Daniel Whitfield, Pontiac, 5 Southdown ewes, 2 years old and over, 1st prem., ... Silver Medal and 5 00

No. 20. Joseph Tireman, Greenfield, 5 Southdown ewes, 2 years old and over, 2d prem., ... 5 00

No. 5. Daniel Whitfield, Pontiac, 5 Southdown ewes, 1 year old and over, 1st prem., ... 5 00

No. 92. Wm. H. Lester, Utica, 5 Southdown ewes, 1 year old and over, 2d prem., ... 5 00

No. 93. Wm. H. Lester, Utica, 5 Southdown buck lambs, 1st prem., ... 5 00

No. 8. Daniel Whitfield, Pontiac, 5 Southdown buck lambs, 2d premium, ... 4 00

No. 7. Daniel Whitfield, Pontiac, 5 Southdown ewe lambs, 1st premium, ... 5 00

JOHN KEAGLE,
CALVIN A. GREEN,
E. H. LOTHROP,
Committee.

CLASS III.—SPANISH MERINOES AND THEIR GRADES.

The Viewing Committee appointed to examine and judge Class No. 3, Spanish Merinoes and their grades, beg leave to report that they have performed the duty assigned them, to the best of their judgment.

The Committee do especially suggest to the Executive Committee, the propriety of awarding to No.'s 42 and 44, of ewes two years old and over, discretionary premiums, as they deem them really worthy of such notice. We respectfully submit to the Executive Committee, the following award of premiums:

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No. 48. Benjamin Peckham, Parma, Spanish buck, 2 years old, 1st premium, ... Silver Medal and $5 00
No. 124. Hiram Smith, Homer, Silician buck, 3 years old, 2d premium, ... Transactions and 5 00
No. 141. John Starkweather, Ypsilanti, Spanish buck, 5 years old, 3d premium, ... 3 00
No. 49. Benjamin Peckham, Parma, Spanish buck, 1 year old, 1st premium, ... Silver Medal and 5 00
No. 125. Hiram Smith, Homer, Silician buck, 2 years old, 2d premium, ... 5 00
No. 143. John Starkweather, Ypsilanti, Spanish buck, 1 year old, 3d premium, ... 3 00
No. 126. Hiram Smith, Parma, Silician lambs, 1st premium, .. 5 00
No. 50. Benjamin Peckham, Parma, Spanish lambs, 2d prem., 4 00
No. 52. John K. Godfrey, Parma, 5 Spanish Grade lambs, 3d premium, ... 3 00
No. 191. George W. Gale, Ypsilanti, 5 Spanish ewes, 2 years old, 1st premium, ... Medal and 5 00
No. 41. C. W. Whitney, Utica, 5 Spanish ewes, 1 year old, 2d premium, ... 5 00
No. 187. Nathan Dickinson, Romeo, 5 Spanish ewes, 1st premium, ... Medal and 5 00
No. 127. Hiram Smith, Homer, 5 Silician ewes, 1st premium, 5 00
No. 144. John Starkweather, Ypsilanti, 6 Spanish ewes, 1st premium, ... 5 00
No. 125. Hiram Smith, Homer, 5 Silician ewe lambs, 1st pre., 5 00
No. 51. Benjamin Peckham, Parma, 5 Spanish ewe lambs, ... 4 00

JESSE LEE STOUT,
A. C. FISK,
WM. A. DENNISON,
Committee.

FRENCH MERINOES AND THEIR GRADES.

The Committee on French Merinoes and their grades, found it exceedingly difficult to decide between No.'s 73 and 10. No. 10 was fairly shown, exhibiting the sheep naturally and fairly, while No. 73

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seemed to be shown with a design to improve the appearance of the sheep. But after a careful examination, the committee decided that No. 73 was entitled to the premium. The following award of premiums, is respectfully submitted:

No. 73. John Brewer, Superior, French Merino buck, 2 years old, 1st premium, ... Silver Medal and $5 00

No. 10. Ira H. Butterfield, Utica, French Merino buck, 2 years old, 2d premium, ... Transactions and 5 00

No. 12. John Brewer, Superior, French Merino buck, 2 years old, 3d premium, ... 3 00

No. 76. John Brewer, Superior, 5 French Merino buck lambs, 1st premium, ... 5 00

No. 11. Ira H. Butterfield, Utica, 5 French Merino buck lambs, 2d premium, ... 4 00

No. 12. Payne K. Leech, Utica, 5 French Merino buck lambs, 3d premium, ... 3 00

No. 75. John Brewer, Superior, 5 French Merino ewes, 1st premium, ... 5 00

No. 192. George W. Gale, Ypsilanti, 5 French Merino ewes, 2d premium, ... 4 00

No. 13. Payne K. Leech, Utica, 5 French Merino ewes, 3d premium, ... 3 00

No. 203. J. H. Benton, Clinton, 5 French Merino ewes, 2 years old, 1st premium, ... Silver Medal and 5 00

No. 74. John Brewer, Superior, 5 French Merino ewes, 2 years old, 2d premium, ... 5 00

No. 188. Nathan Dickinson, Romeo, 5 French Merino ewes, 2 years old, 3d premium, ... American Shepherd and 3 00

JAMES DE PUY,
L. ANDREWS,
S. BROOKS,
Committee.

CLASS V.—SAXON AND THEIR GRADES.

Report of the Committee on Saxon Sheep, and their grades, made at the Fifth Annual Fair of the Michigan State Agricultural Society.

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The Committee would remark that all the animals on exhibition were fine, but regret to say that there was not much competition, and therefore, there was not that interest which sould have been in this class of sheep. We all agree that buck No. 105 is a choice animal of his class; this, and the following awards we respectfully submit:

No. 105. Geo. Blumburgh, Royal Oak, Saxon buck, 2 years old and over, 1st prem., ... Silver Medal and 5 00

No. 67. J. P. Gillett, Sharon, Saxon buck, 2 years old, 2d premium, ... Trans. and 5 00

No. 67. J. P. Gillett, Sharon, Saxon buck, 2 years old, 3d prem., 3 00

No. 68. " " " " 1 year old, 1st prem., 5 00

No. 68. " " " " " " " 2d prem., 3 00

No. 106. Geo. Blumburgh, Royal Oak, Saxon buck 1 year old, 3d prem., ... 2 00

No. 64. J. P. Gillett, Sharon, 5 Saxon ewes, 2 years old and over, 1st prem., ... Silver Medal and 5 00

No. 65. J. P. Gillett, Sharon, 5 Saxon ewes, 2 years old, 2d prem., ... 5 00

No. 66. J. P. Gillett, Sharon, 5 Saxon ewes, 1 year old, 1st prem., ... Silver Medal and 5 00

No. 66. J. P. Gillett, Sharon, 5 Saxon ewes, 1 year old, 2d prem., ... 5 00

No. 66. J. P. Gillett, Sharon, 5 Saxon ewes, 1 year old, 3d prem., ... American Shepherd and 3 00

No. 69. J. P. Gillett, Sharon, 5 buck lambs, 1st prem., ... 5 00

No. 70. J. P. Gillett, Sharon, 5 ewe lambs, 1st prem., ... 5 00

GEO. W. GALE,
E. L. BROWN,
STILLMAN RALPH,
GEO. W. ROOD,
B. PIERSON,

Committee.

CLASSES VI. & VII.—NATIVE AND FAT SHEEP.

The Committee on Native and Fat Sheep, would very respectfully submit the following list of premiums, awarded as their report:

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No. 163. Nathan Earle, Plymouth, 5 Native fat ewes, 1st premium, ... Silver Medal and $5 00
No. 22. Joseph Tireman, Greenfield, 5 Native fat ewes, 2d premium ..... Transactions and 5 00
No. 162. Nathan Earle, Plymouth, fat sheep, 1st premium .. 3 00

H. HAYNES,
STEPHEN ALLEN,
Committee.

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CLASS VIII.—FOREIGN SHEEP.

The Committee on Foreign Sheep, have performed their duty; and after a careful examination of some sixty pens of very fine sheep, of Bloods and Grades, submit the following, as their judgment:

No. 144. John Starkweather, Ypsilanti, long wooled buck, 1st premium $5 00
No. 142. John Starkweather, Ypsilanti, Spanish Merino buck, 1st premium 5 00
No. 14. C. W. Whitney, Utica, 5 Spanish Merino ewes, 1st premium 5 00
No. 73. Jno. Brewer, Superior, 5 French Merino bucks, 1st prem., 5 00
203. J. H. Benton, Port Huron, 5 French Merino ewes, 1st premium 5 00
No. 76. John Brewer, Superior, 5 French Merino buck lambs, 1st premium 5 00
No. 75. C. W. Whitney, Utica, 5 French Merino ewe lambs, 1st premium 5 00

MERRITT FISHER,
IRA PHILLIPS,
H. COMPTON,
LYMAN FULLER,
Committee.

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SWINE.

Your Committee appointed to view and report on Swine, would respectfully submit the following list of premiums as their report:

No. 102. F. W. Backus, Detroit, Berkshire boar, 1st premium, ... Bronze Medal and $5 00

No. 101. F. W. Backus, Detroit, Berkshire breeding sow, 1st prem., ... Bronze Medal and 5 00

No. 104. F. W. Backus, Detroit, Berkshire pigs, 1st prem., ... 5 00

No. 62. G. Knapp, Albion, Leicester sow, 1st prem., Bronze Medal and 5 00

No. 99. Wm. R. Roberts, Hamtramck, Grade boar, 2 years old, 1st prem., ... Bronze Medal and 5 00

No. 189. Lewis Foote, Kensington, Grade boar, 2 years old, 2d prem., ... 3 00

No. 136. E. H. Cressy, Troy, Grade boar, 1 year old, 1st premium, ... Bronze Medal and 5 00

No. 53. James Holly, Napoleon, Grade boar, 2 years old, 2d prem., ... 3 00

No. 146. A. H. Otis, Greenfield, breeding sow, 2 years old, 1st prem., ... 5 00

No. 103. F. W. Backus, Detroit, breeding sow, 2 years old, 2d prem., ... 3 00

No. 147. A. H. Otis, Greenfield, lot pigs, 4 months old, 1st prem., ... 3 00

No. 148. H. Jubb, Detroit, China sow and pigs, recommended for premium.

No. 27. Lansing K. Jennee, Bethany, N. Y., Suffolk sow, 4½ months old, recommended for premium.

No. 28. Lansing K. Jennee, Bethany, N. Y., Leicester boar, recommended for premium.

No. 23. Slade & Bro., Detroit, lot Suffolk pigs, 1st prem. 5 00

ROBERT FERGUSON,
THOMAS BUSH,
Committee.

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POULTRY.

We the undersigned, Committee on Poultry, respectfully report that the show of the poultry, this year, has been very large, and as your Committee have been informed, much greater than at the last Annual State Fair. In some of the varieties the competition was not very great, while in others, so little difference was perceptible that it rendered it difficult for your Committee to come to a decision. Many of the fine fowls were from the State of New York, and could not, therefore, under the regulations, receive any award of premiums, or come into competition with those from our own State. The Shanghai, Cochin China, Dorkins, Brahma Pootra, Black Poland, and Chittagongs, were well represented, many of which your Committee feel called upon to mention in the highest terms. Of the foreign poultry, we cannot forbear speaking of several fine varieties exhibited by Mr. Van Duzen, of Phelps, N. Y., by Messrs. Kent, Goodwing, and J. Reynolds, of Bristol N. Y. They would also mention, as worthy of notice, a fine collection of Cochin China fowls, and a coop of Shanghai chickens, exhibited by Henry Bibb, of Canada West.

Your Committee would further recommend a fine collection of Shanghais, belonging to Ira Slade of the City of Detroit, for a special premium. When your Committee made their examinations, they were numbered, and they were informed that they were foreign, and your Committee did not learn differently, until after they had made out their awards. Of Turkeys, we regret to say, that few were on exhibition. Your Committee found a large beautiful white Turkey, not numbered or entered, and owned and raised by a Mr. Beaufait, of Wayne County, Michigan, called on the label, a large Grosse Point Turkey, for which the Committee recommend a discretionary premium.

All of which is respectfully submitted.

No. 118. Doct. M. Freeman, Schoolcraft, best lot Cochin China fowls, ... $3 00

No. 46. Benjamin Beckham, Parma, best lot Shangai fowls, .. 3 00

No. 120. M. Freeman, Schoolcraft, best lot Dorking fowls, ... 3 00

No. 122. " " " Bantam " 3 00

No. 116. " " " Cross breed Dominico and Shanghai, ... 3 00

No. 135. Prince Bennett, Ypsilanti, best lot Poland, ... 3 00

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No. 185. N. A. Prudden, Ann Arbor, best lot Chittagong,.... $3 00
No. 165. Wm. Hudson, Hamtramck, best variety exhibited, Pearl Shanghai,..... 3 00
No. 83. A. A. Gardinet, Northville, 2d best lot Cochin China fowls,..... 2 00
No. 54. J. N. Childs, Paint Creek, 2d best lot Shanghai fowls, 2 00
No. 1. Francis Leslie, Dearborn, 2d best lot Dorking fowls,.. 2 00
No. 155. William Cook, Detroit, " " Bantam " ... 2 00
No. 117. M. Freeman, Schoolcraft, 2d " Chittagong " ... 2 00
No. 119. " " 2d " Cross breed speckled Cochin and Dorking,..... 2 00
No. 130 A. T. McReynolds, Detroit, 2d best variety,..... 2 00
Doct. M. Freeman, Schoolcraft, best and largest collection of fowls, grown by exhibitor,..... 5 00
No. 154. Francis Leslie, Dearborn, best lot black turkeys,... 3 00
No. 180. C. W. Whitney, Shelby, best lot white turkeys,..... 3 00
No. 172. Wm. Hudson, Hamtramck, best lot large ducks,.... 3 00
No. 171. " " " small " 3 00
No. 2. Francis Leslie, Dearborn, best lot Guinea fowls,..... 3 00
No. 129. " " " grey geese,..... 3 00
No. 164. Wm. Hudson, Hamtramck, best lot pea fowls,..... 3 00
No. 179. C. W. Whitney, Shelby, best lot wild turkeys,..Discretionary.
Lewis Beaufait, Grosse Point, turkey, ... 2 00
No. 182. M. Freeman, Schoolcraft, 1 pair white swans. Discretionary.
George Hentig, Marshall, for the greatest number and weight of eggs from a lot of hens, during the season, per hen,..... 5 00

H. G. WELLS,
G. M. DAVIS,
WALTER W. MURPHY,
WARREN ISHAM,
Committee.

CLASS C.—FARM IMPLEMENTS.

CLASSES I AND II.

The Committee on Class C., Farm Implements, Classes 1 and 2, report that have examined the articles submitted to them, and make the following awards:

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No. 73. H. W. Ingersoll, Niles, best farm wagon, Diploma and $5 00
No. 82. Ferdinand Oxenfeld, Detroit, 2d best farm wagon, 5 00
No. 96. F. F. Parker & Brother, Detroit, best harrow, 3 00
No. 11. Walter Chester, Detroit, best corn stalk cutter, 5 00
No. 12. J. T. Willson, Jackson, best corn cob crusher, 5 00
No. 14. F. Danforth, Olivet, best straw cutter, 5 00
No. 75. C. A. Crary, Columbia, best horse rake, 5 00
No. 74. J. S. Gay, Dowagiac, best roller for general use, 5 00
No. 19. Joseph Dinnebake, Detroit, best carriage harness, Diploma and $2 00
No. 39. D. O. & W. S. Penfield, Detroit, best churn, 2 00
No. 91. F. F. Parker & Brother, " " cheese press, 2 00
No. 83. R. C. Simmons, Novi, best grain cradle, 2 00
No. 67. John Hutchins, Southfield, best 12 twine tied brooms, 2 00
No. 80. Jasper Thomas, Geneseo, Ill., best bee hive, 3 00
No. 1. Wm. Hackley, Belleville, Jefferson county, N. Y., cheese press, Diploma.
No. 59. R. E. Case, Three Rivers, single harness, 2 00
No. 77. Platt Adams, Detroit, single harness, 2 00

PAYNE K. LEECH,
JOSEPH SIMMONS,
JOSEPH GILMAN,
Committee.

CLASS III.

No. 4. John Hanford, Detroit, best thrashing machine, Diploma and $10 00
No. 5. John Hanford, Detroit, one plough, Discretionary.
No. 7. Charles S. Chisholm, Dayton, Ohio, best corn seed planter for hills and drills, Diploma and 5 00
No. 15. P. Latshaw, Erie, steel plough. Discretionary.
No. 16. F. A. Haviland, Ann Arbor, best wheat drill, 5 00
No. 17. John H. Rauch, Monroe, best corn sheller, 2 00
No. 18. D. R. Doxie, Hillsdalle, best grass seed sower, Discretionary.
No. 26. D. O. & W. S. Penfield, Detroit, No. 6 plow, Discretionary.
No. 29. " " " cast steel, round scraper, "
No. 31. " " " corn and seed planter, hand or horse, 5 00

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No. 34. D. O. &. W. S. Penfield, Detroit, 1 sheep power for churn, ... Discretionary.
No. 35. D. O. & W. S. Penfield, Det., 1 dog power for churn, .. "
36. " " " 1 hydraulic ram churn, .. "
40. " " " best vegetable cutter, .. Diploma.
41. " " " sausage stuffer, ... Discretionary.
42. " " " " meat cutter, ... "
43. " " " garden engine, ... "
44. " " " corn cultivator, ... "
45. " " " chain pump, rigged, ... "
46. " " " apple paring machine, .. "
47. " " " portable cider mill and cheese press combined, ... Diploma and 5 00
No. 52. D. O. & W. S. Penfield, Det., Eagle plow No. 74, .. Discretion'y.
55. " " " 1 Emery & Co.'s thresher and separator, ... Diploma and 10 00
No. 56. D. O. & W. S. Penfield, Detroit, Emery & Co.'s portable circular saw mill for wood, ... Diploma and 5 00
No. 57. D. O. & W. S. Penfield, Detroit, Emery & Co.'s one horse power, ... 5 00
No. 58. William Fisher, Brockport, N. Y., Seymour, Morgan & Co.'s reaper and mower, 2d premium, ... 5 00
No. 63. T. A. Flower, Pontiac, best wheel cultivator, Diploma & 2 00
No. 66. John Daines, Birmingham, best drain tile, ... 3 00
No. 69. John S. Wright, Chicago, Ill., Atkin's automaton reaper, mower and raker, 1st premium, ... Diploma and 10 00
No. 70. Elliott Harrington, Northville, 1 double plow or jointer, ... Diploma and 5 00
No. 92. F. F. Parker & Bro., Detroit, 1 lap-furrow plow, .. Discretionary.
97. " " 1 clover huller, .. Discretionary.
99. " " 1 cultivator. ..... Discretionary.
100. " " 1 vegetable cutter, Discretionary.
103. " " 1 apple and peach parer, do

STAFFORD GODFREY,
A. HAGENBACH,
J. T. WILLSON,
Committee.

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PLOWS, AND PLOWING.

The Committtee on Plows and Plowing, learned when about to view the many excellent plows on exhibition, that the Committee on Farm Implements had examined, and intended to report on the plows; therefore, not wishing to interfere with what that Committee supposed to be their duty, we have left the examination of plows to them.

The Committee further report that they did not suppose it to be a part of their duty to provide a place to plow, and therefore had no place provided, in consequence of which the plowing was postponed till Friday, the 30th. Had the plowing taken place at the time advertised, there would probably have been more competitors.

The plowing took place on the Cass farm, and four plows entered the work in good earnest.

Two teams of horses, and one with oxen; one with a Jointer or double plow, with both horses and oxen; each piece was plowed within the time allowed, the shortest being thirty seven minutes, and longest forty-two minutes.

J. W. Collins, of Farmington, Oakland county, plowed with oxen, and although no competition, we think him entitled to the name of a good *plowman, and recommend that a premium be awarded to him of* $10 00

C. W. Green, of Farmington, plowed with a Curtis Improved plow, No. 8., manufactured at Northville, with Jointer attached. He did the work exceedingly well, both deep and smooth. We award to him the first premium, ---------- $10 00

Robert Proctor plowed with a two horse team, entered by Titus Dort, of Dearborn. The plow used by him was Starbuck's No. 4, Trojan plow.

Alexander Wattles, of Troy, also plowed with a two horse team, and used Starbuck's No. 6, C. plow; each of them did their work extremely well. After close examination the Committee recommended that Robert Proctor be awarded the first premium, $10 00, and Alexander Wattles, the second premium, Gardner's Farmer's Dictictionary and $7 00.

IRA H. OTIS,
Ch'n of Committee.

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BUTTER, CHEESE, SUGAR AND HONEY.

The Committee appointed to examine specimens of Butter, Cheese, Honey and Sugar offered for premium, respectfully report that they have performed that duty, and refer to the following report for the list of premiums awarded:

In addition to the premiums, much praise is justly due to all who presented specimens of butter. Some very fine specimens were offered, but unfortunately, all could not draw premiums. It is a source of gratification, that we have so many good butter makers among us, and your Committee feel quite confident that the time is not distant, when Michigan butter will stand as high as any made in the Union.

The show of cheese was unusually large, and of excellent quality; each specimen deserving a premium, and your Committee regret that premiums could not be so bestowed.

We can make as good cheese in this State as can be produced anywhere, and your committee hope soon to see Michigan cheese take the place in our market, to which it is entitled. Of honey, the show was very beautiful and entitled to great praise. Also, the specimens of sugar offered were excellent; the successful specimens particularly so.

No. 1. Joris Wiendyk, Grosse Point, one Dutch cheese,.Discretionary.
No. 2. Wm. S. Higby, Lapeer, 2d best lot maple sugar,..... $3 00
No. 3. " " 3d " " 2 00
No. 11. A. L. Gilbert, Corunna, best 10 lbs. " 5 00
No. 36. Mrs. R. B. Hampton, Hickory Grove, best 18 lbs. butter, made in June,.....Silver Medal and 5 00
No. 36. A. Streeter, Romeo, 2d best 18 lbs. butter made in June,.....1 Vol. Transactions and 3 00
No. 15. Wm. Lowe, Birmingham, 3d best 18 lbs. butter made in June,..... 2 00
No. 37. Mrs. R. B. Hampton, Hickory Grove, best 18 lbs. butter made at any time,.....Silver Medal and 5 00
No. 4. James Smith, Greenfield, 2d best 18 lbs. butter made at any time,.....1 Vol. Transactions and 3 00
No. 5. James Smith, Greenfield, 3d best 18 lbs. butter made at any time,..... 2 00
No. 8. Henry Waldron, Pontiac, 4th best 18 lbs. butter made at any time,..... 1 00

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No. 20. Luther Lapham, Farmington, 2 old cheese, 25 lbs. each, 1st premium, ... Silver Medal and $8 00
No. 22. James H. Murray, Farmington, 3 old cheese, 25 lbs. each, 2d premium, ... Webster's Encyclopedia and 3 00
No. 27. A. Streeter, Romeo, 1 cheese, 25 lbs., 3d premium, ... 3 00
No. 19. A. Lapham, Farmington, 8 new cheese, 1st premium, 5 00
No. 23. James H. Murray, Farmington, 18 new cheese, 2d premium, ... Webster's Encyclopedia and 2 00
No. 21. Luther Lapham, Farmington, 2 new cheese, 3d prem., 2 00
No. 18. N. Lapham, Farmington, 1 sage cheese, 1st premium, 5 00
No. 10. Geoorge R. Hurd, Monroe, 1 sage cheese, 2d premium, ... Webster's Encyclopedia.
No. 7. E. L. Power, Livonia, 1 sage cheese, 3d premium, ... 2 00
No. 13. E. B. Spencer, Redford, best specimen honey, ... 3 00
No. 12. " " 2d best " " 2 00
No. 9. Henry Waldron, Pontiac, 3d best " " 1 00

O. B. DIBBLE,
Ch'n Committee.

CLASS E.—DOMESTIC MANUFACTURES.

CLASS I.

The Committee on Domestic Manufactures, Class No. 1, recommend the following awards:

No. 14. Jane Mack, Romeo, best 10 yards white flannel, ... $5 00
No. 106. Jno. Hutchins, Southfield, 2d best 10 yds white flannel, 4 00
No. 2. Francis Leslie, Dearborn, 3d " " 2 00
No. 122. Jane Mack, Romeo, best pair woolen blankets, ... 5 00
No. 1. Francis Leslie, Dearborn, 2d best pair " Trans. and 4 00
No. 26. John Gray, " 3d " " 2 00
No. 16. Jane Mack, Romeo, best 10 yards woolen cloth, ... 5 00
No. 49. Mrs. Titus Dort, Dearborn, 2d best 10 yards woolen cloth, ... Transactions and 4 00
No. 60. Sophia Warner, Ray, 1 piece woolen and cotton carpeting, ... Discretionary.

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No. 167. Mrs. Getchell, Detroit, best hearth rug, ... $3 00
No. 168. " " 2d best " Transactions & 1 00
No. 117. Catharine McKim, Superior, 3d best hearth rug, ... 1 00
No. 188. J. Davis, Plymouth, best 10 yards rag carpet, ... 3 00
No. 13. Jane Mack, Romeo, 2d " " " 2 00
No. 73. C. Hadsell, Pontiac, 3d " " " ...Transactions.
No. 72. " " 1 piece rag and twine carpet, .Discretionary.
No. 163. Mrs. Jane Bailey, Troy, best pair woolen stockings, Transactions and 2 00
No. 102. J. L. Stout, Troy, 2d best pair woolen stockings, ... 1 00
No. 165. W. A. Denison, Troy, best pair worsted stockings, ... 2 00
No. 142. Mrs. Helen Vail, Ypsilanti, best pair woolen socks, .. 2 00
No. 88. Wm. Lowes, Birmingham, 2d " " .. 1 00
No. 101. Mrs. J. L. Stout, Troy, best pair woolen mittens, ... 1 00
No. 90. Mrs. E. Sawyer, Grand Blanc, 1 pair fringed woolen mittens, ... Discretionary.
No. 89. Wm. Lowes, Birmingham, 1 pair woolen gloves, ... "
No. 113. W. Beesom, Pittsfield, best woolen coverlet, ... 4 00
No. 123. Jane Mack, Romeo, 2d " " Trans. and 2 00
No. 9. " " 3d " " 1 00
No. 15. " " best piece satinet, ... 2 00
No. 121. " " best woolen shawl, Downing's Cottage Residences and 3 00
No. 10. Jane Mack, Romeo, 2d best woolen shawl, .Trans. and 3 00
No. 178. L. Chase, Rose, 3d best woolen shawl, ... 3 00
80. Martha Dyer, Jackson, best white quilt, ... 5 00
64. Mrs. J. E. Taylor, Pontiac, 2d best white quilt, ... 4 00
76. Mrs. Isaac J. Voorhies, Waterford, Oakland Co., 3d best white quilt, ... 3 00
184. O. M. Patton, Ann Arbor, 4th best white quilt, ... 2 00
185. " " 5th " " " 1 00
92. Mrs. John McLaughlin, Detroit, best silk quilt, ... 3 00
100. Mrs. J. C. Holmes, " 2d best " " Transactions and 1 00
91. Mrs. M. A. Sawyer, Grand Blanc, best patch-work quilt, 5 00
174. Levi Bennett, New Haven, 2d " " " " 4 00
36. Wm. Lowes, Birmingham, 3d " " " " 3 00

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No. 85. Wm. Lowes, Birmingham, 4th best patch-work quilt, $2 00
147. Martha Hewitt, Spring Arbor, 5th " " " " 1 00
164. Mrs. W. A. Dennison, Troy, best sample woolen yarn, 3 00
17. Jane Mack, Romeo, 1 piece plaid woolen lining, . . Discretionary.
51. Wm. Tate, Detroit, 1 case hair work, ... Diploma.
10. Mrs. Mary Bowman, Detroit, 1 knit counterpane, . . Discretionary.
67. Mrs. J. Hendrickson, " 1 piece dimity flannel, Discretionary.
57. S. Perry, Ray, beautiful specimen woolen yarn, Discretionary.
58. " " " " " " Discretionary.
21. Jane Mack, Romeo, " " " " " Discretionary.
179. L. Chase, Rose, " " " " " Discretionary.

We have great pleasure in stating that the competition on Quilts, both white and patch-work, was large and highly creditable to the ladies who presented them. Many of the quilts were very beautiful, and evinced great taste and industry in their execution.

The specimens of woolen yarn were very beautiful, and the same may be said of the woolen hosiery.

The Committee regret that no specimens of cotton hosiery were offered. They hope that the wives and daughters of Michigan, will present specimens of this article at our next Annual Fair.

All of which is respectfully submitted.

JEREH. BROWN,
H. J. ALVORD,
Mrs. S. S. GALE,
Mrs. G. W. COLLINS,
Committee.

CLASS II.—FACTORY MADE.

No.'s 27, 28. Geo. B. Pease, Detroit, 1 piece tapestry velvet carpeting, 1 piece carpeting, coral pattern, ... Diploma and $3 00
No.'s 29, 30. Geo. B. Pease, Detroit, 1 piece ingrain carpeting, 1 piece ingrain carpeting, forest pattern, ... Diploma and 2 00
No. 31. Geo. B. Pease, Detroit, 3 pieces oil cloth, Diploma and 2 00
32. " " 2 sheep skin rugs 2 00
33. " " 1 tapestry rug 2 00
34. " " 1 piece silk and worsted damask . . . . . Discretionary.

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No.'s 149, 150, 151. M. Osborne, Ann Arbor, 1 piece black cassimere; 1 piece brown cassimere; 1 piece grey cassimere, ... Diploma and $5 00

No. 152. M. Osborne, Ann Arbor, 1 piece white flannel, Dip. & 3 00

153. " " " cotton and wool flannel. 2 00

A. G. EASTMAN,
Ch'n of Committee.

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CLASS III.

The Committee on Domestic Manufactures—Class three—make the following report:

No. 74. Cyrus Hadsell, Pontiac, best knit cotton stockings, ... $2 00

6. Francis Leslie, Dearborn, 2d best knit cotton stockings, .Discre'y

24. Ann Jones, " 1 pair " " " ... "

11. Jane Mack, Romeo, best 10 yards tow cloth, ... $5 00

12. " " 2d best 10 " " 3 00

118. Catharine McKim, Superior, best pair knit linen stockings, ... 2 00

No. 99. Mrs. M. D. Hamilton, Detroit, 1 pair knit linen stockings, ...Discretionary.

No. 107. John Hutchins, Southfield, best 10 yards linen diaper, ... $5 00

No. 108. John Hutchins, Southfield, best 10 yards colored diaper, ... 3 00

No. 120. Joseph Giles, Novi, 1 pair knit bed curtains, ..Discretionary.

124. Jane M. Burt, Kalamazoo, 1 white quilt, ... 5 00

JOHN STARKWEATHER,
WM. D. HOLT,
Committee.

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CLASS IV.

The Committee to whom was assigned the duty of examining the articles enumerated in Class No. 4, Domestic Manufactures, report that they do not find so large a display as would be desirable; they were pleased, however, to find that the deficiency in numbers was in a great

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measure made up in skill and excellence. In some instances, when but one sample of a kind was exhibited, they have awarded the first premiums, as they think, justly:

No. 132. Nichols & Lefavor, Detroit, best pair cowhide boots, $3 00
133. " " " 2d best pair " 2 00
68. Swift & Seymour, " 3d " " Trans.
126. Nichols & Lefavor, " " calf " $3 00
127. " " " 2d " " " 2 00
79. Henry McFarlane, " 3d " " " 2 00
134. Nichols & Lefavor, " " cowhide shoes 2 00
139. " " " " calf bootees, 2 00
37. Ladue & Eldred, Detroit, best 6 sides slaught'd leather, 2 00
38. " " " " harness " 2 00
40. " " " " upper " 2 00
39. " " " " bridle " 2 00
42. " " " 6 calf skins..... 2 00
41. " " " best 6 kip skins,..... 2 00
158. P. McTerney, " best overcoat,..Diploma and 4 00
7. Eagle & Elliott, " best dress coat,..... 3 00
159. P. McTerney, " best pair pants,..... 2 00
98. Mrs. M. D. Hamilton, Detroit, best vest, ... 2 00
160. P. McTerney, " 2d best vest,....Transactions.
186. Geo. Winter, " best silk hat, Diploma & 2 00
193. F. Buhl & Co., " 2d best silk hat,..Transactions.
110. A. Streeter, Romeo, best straw hat,..... 3 00
111. " " 2d best straw hat,..... 2 00
187. Geo. Winter, Detroit, lot of cloth caps,.....Discretionary.
194. F. Buhl & Co., " " " ..... "

J. C. LEONARD,
Ch'n Committee.

CLASS V.

The Committee on Domestic Manufactures, Class 5, report the following awards:

No. 36. Augustus Day, Detroit, best screw bedstead, Diploma & $2 00
No. 46. John Patton, Detroit, best two horse carriage, " & 8 00
No. 182. " " 2d " " " Trans. and 5 00
No. 47. " " best one " " Diploma & 5 00

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No. 77. D. O. & W. S. Penfield, Detroit, Stuart's cooking stove and furniture,.....Diploma.

No. 81. A. E. Perkins & Co., Detroit, best rocking chair,.... 1 00

No. 82. " " " 6 chairs,..... 2 00

No. 82. " " " sofa,..... 3 00

No. 95. McGregory & Bro., Detroit, best set of horse shoes,..Diploma.

No. 145. T. Henly, " 2d " " " Trans. & 1 00

No. 96. McGregory & Bro., " best pound horse shoe nails,.. 1 00

No. 105. F. Danforth, Westfield, N. Y., exhibited a model ox yoke, which we think a great improvement, and would recommend a premium be awarded the inventor, of..... 2 00

No. 125. W. Y. Baker, Detroit, one single top carriage,..... 3 00

No 48. John Patton, " exhibited 1 of Hulburt's patent spring buggy wagons. We think this is the best wooden spring ever invented. Not entered for competition.

GEORGE CHANDLER, *Ch'n.*

PAINTINGS, DRAWINGS, AND DAGUERREOTYPES.

The Committee on Paintings, Drawings, and Daguerreotypes, respectfully report that they are constrained in the outset, to express their regret that the exhibition of articles submitted to their inspection, should be limited to so small a number of competitors.

We have reason to believe, from our own knowledge, as well as from the former exhibitions at our Annual Fairs, that the present display does not do adequate justice to the advancement of Michigan Artists, or condition of art among us. The exhibition has some very meritorious articles; but for some classes of articles, there is no offer for a premium, and for some others, so little competition as scarcely to be considered at all.

For painting in oil colors, not the work of a Michigan artist, no subjects are offered.

We report the following awards:

No. 39. C. O. Lum, Detroit, best specimen animal oil painting,..... Diploma and $5 00

No. 54. W. R. Wheeler, Adrian, best specimen cattle drawing,..... Diploma and 5 00

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No. 1. O. D. Moore, Detroit, best single specimen daguerreotypes ..... Diploma and $2 00

No. 27 Sutton & Bro., Detroit, 2d best single specimen daguerreotype, ... 2 00

No. 115. G. E. Hall, Detroit, 3d best single specimen daguerreotype, ... 1 00

No. 106. John Goodison, Detroit, best oil painting, Diploma and 5 00

No. 85. F. E. Cohen, Detroit, 2d best oil painting, ... 5 00

No. 42. W. R. Wheeler, Adrian, 3d best oil painting, ... 3 00

No. 110. John Goodison, Detroit, best specimen water colors, ... Diploma and 5 00

No. 68. Miss Janette T. Nixon, Detroit, 2d best specimen water colors, ... Diploma and 3 00

No. 58. E. St. Alary, Detroit, crayon landscape, ... Discretionary.

No. 57. E. St. Alary, Detroit, 2 colored crayon portraits, Discretionary.

No. 59. L. Davenport, Detroit, 2 crayon sketches, ... Discretionary.

No's. 31 to 35, and 76 and 77. O. & A. Jordon, Detroit, architectural drawings, ... Discretionary.

No. 119. Miss Thomas, Edwardsburgh, painting of cut flowers, ... Discretionary.

In concluding our report, we desire to say that we found much difficulty in arriving at conclusions satisfactory to ourselves, owing to the crowded state of the hall, which denied us adequate opportunities for inspection of some articles that demanded careful and critical examination. This may have led us into some errors of judgment; but as it was occasioned by an earnest interest in the subject of the exhibition, by the throng of people who have honored our Annual Fair by their presence, if any artist shall deem himself a sufferer by our conclusions, we hope the occasion will be a sufficient apology to him, and justification to ourselves.

HOVEY K. CLARKE,
ORLANDO H. MOORE,
Committee.

September 30th, 1853.

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NEEDLE, SHELL AND WAX WORK.

The Committee on Needle, Shell and Wax Work, report as follows:

No. 2. Mrs. S. Lemcke, Detroit, 2 cases ornamental hair work, Medal.
3. " " " best specimen artificial flowers, bead work, ... $3 00
No. 8. Mrs. William Stewart, Detroit, best worked collar, &c. ... 3 00
100. Mrs. J. Starkweather, Ypsilanti, 2d best worked collar, &c., ... 2 00
No. 47. Miss Caroline K. Sawyer, Grand Blanc, 3d best worked collar, &c., ... 1 00
No. 29. Miss Wadleigh, Detroit, best worked port folio, ... 3 00
49. Margaret Thompson, Detroit, ottoman covers, worsted work, ... Cottage Residences.
No. 91. Mrs. Jno. Atkinson, Detroit, 2d best ottoman cover, .. 2 00
36. Mrs. Penfield, Detroit, 3d best ottoman cover, ... 1 00
92. Mrs. J. Atkinson, Detroit, best chair covers, Cottage Residences.
No. 48. Miss Margaret Thompson, Detroit, 2d best chair covers, 2 00
96. Miss Julia A. Buhl, Romeo, best two lamp mats, ... 3 00
114. Miss Lucina E. Flower, Pontiac, 2d best two lamp mats, ... 2 00
No. 53. Miss Frances M. Kent, Galesburgh, 3d best two lamp mats, ... 1 00
No. 59. Miss S. Perry, Armada, 2 lamp mats, ... 2 00
No. 55. Mrs. Kellard, Detroit, best ornamental needle work, ... 3 00
No. 123. Mrs. Geo. Doty, " 2d best " " ... 2 00
No. 84. Mrs. W. E. Bibb, Windsor, C. W., 3d best ornamental needle work, ... 1 00
No. 66. Mrs. Jereh. Brown, Battle Creek, best specimen ornamental shell work, ... 3 00
No. 103. Madison Lightfoot, Detroit, 2d best specimen ornamental shell work, ... 2 00
No. 74. Miss Sarah Wall, Detroit, best specimen worsted work, flowers, ... 3 00
No. 126. Mrs. E. J. Wooley, Detroit, 2d best specimen worsted work, flowers, ... 2 00
No. 90. Miss Emily Baldwin, Detroit, 3d best specimen worsted work, flowers, ... 1 00

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Mrs. Isaac French, Adrian, best artificial flowers, ... $3 00
No. 82. Miss M. F. Elliott, Detroit, best lace work, pocket hdkf, 3 00
No. 63. Mrs. H. L. Whitney, " 2d best " " " 2 00
No. 45. Miss Caroline P. Sawyer, Grand Blanc, 3d best lace work, pocket hdkf, ... 1 00
No. 61. Martha Wilson, Detroit, basket fruit in wax work, ... 2 00
No. 1. Martha Glass, Detroit, one pair net worked stockings, .. 2 00
No. 73. T. H. Armstrong, Detroit, 2 cases embroidered regalia, ... Silver Medal.
No. 127. Holmes & Co., Detroit, embroidered drab cloak, Discretion'y
No. 128. " " " maroon velvet " ... "
No. 129. " " 1 black head dress, ... "
No. 130. " " 2 dress caps, ... "
No. 131. " " 1 neck tie, ... "
No. 132. " " best embroidered bonnet, ... 3 00
No. 133. " " 3 bunches artificial flowers, Discret'ry.
No. 134. " " 1 basket wax fruit, ... "
Freedman & Bro., " 2d best silk bonnet, ... 2 00
Miss Moller, " 3d best " 1 00
Miss Lucy Ann Tasker, " collection worsted work, Discretionary.

CLASS G.—FLOWERS.

The Viewing Committee in the Floral Department, would report their gratification in finding a decided improvement over the last year, in the design and decorations of the hall, the evergreen wreaths are most beautifully as well as artistically arranged; reflecting much credit on those who prepared it.

A greater variety, and more choice flowers, were presented for exhibition, than last year. Of annuals, there was a beautiful display:

No. 153. Mrs. Jeremiah Brown, Battle Creek, for the best and greatest variety and quantity of cut flowers, ... $3 00
No. 64. Wm. Smail, Detroit, for the 2d best and greatest variety and quantity of cut flowers, ... 1 00
No. 91. Hubbard & Davis, Detroit, collection of cut flowers, containing beautiful varieties of choice flowers, Discretionary Prem.

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No. 230. Wm. Adair, Detroit, best and greatest variety of dahlias, ... Western Horticultural Review and $1 00

No. 65. William Smail, Detroit, 2d best and greatest variety of dahlias, ... Transactions and 1 00

No. 214. Jereh. Brown, Battle Creek, a good collection of dahlias, prettily arranged in moss, ... Discretionary.

No. 231. William Adair, Detroit, best 12 dissimilar blooms, Hovey's Magazine and 1 00

No. 66. Wm. Smail, Detroit, 2d best dissimilar blooms, ... 2 00

232. Wm. Adair, " best single dahlia, ... 2 00

325. " " best and greatest variety of roses, ... 2 00

No. 240. E. G. Mixer & Co., Detroit, roses, ... Discretionary.

241. " " " 10 dissimilar blooms, 2 00

236. Wm. Adair, Detroit, best 6 varieties phlox, ... 2 00

304. T. G. Angel, " best and greatest variety verbenas, (40 varieties,) 2 00

No. 152. Mrs. Jereh. Brown, Battle Creek, best and greatest variety indigenous flowers, ... 2 00

No. 68. Wm. Smail, Detroit, best collection green-house plants, 3 00

245. E. G. Mixer, & Co., Detroit, floral design,

303. T. G. Angel, " "

Only two designs, strictly so, were exhibited—a floral temple and a chaste rural monument to the late lamented Mr. Downing. Both are appropriate and beautiful. The Committee found it difficult to decide in such a matter of taste. They would therefore recommend to the Executive Committee, in this instance, to depart from the usual course, and divide the value of the first and second premiums equally, between the two exhibitors.

No. 246. E. G. Mixer & Co., Detroit, best hand bouquet, ... $2 00

180. Mrs. Mark Norris, Ypsilanti, best round bouquet, (containing 110 varieties,) ..... Gray's Botany.

No. 246. E. G. Mixer & Co., Detroit, 2d best round bouquet, .. 1 00

2 round bouquets of choice flowers, from the garden of Mrs. E. M. Sheldon, of Detroit, not entered for premium, were beautiful and much admired, ... Discretionary.

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No. 147. Mrs. J. C. Holmes, Detroit, the most beautiful arranged basket of flowers, ... $2 00

No. 149. Mrs. Jereh. Brown, Battle Creek, basket of flowers, ... Discretionary.

No.'s 247, 248. E. G. Mixer & Co., Detroit, baskets flowers, Discre'ry.

317. John L. Brownell, Farmington, basket flowers, Buel's Farmers' Companion.

No. 203. Wm. Ball, Detroit, a large bouquet of dahlias, Discretionary.

146. Geo. Crabb, Detroit, fine specimens of coxcomb, Poulteur Companion.

No. 148. Mrs. J. C. Holmes, Detroit, a statuette, with fruit and flowers, an ingenious and pleasing design, ... Discretionary.

M. L. FITCH,
B. W. STEERE,
MRS. R. B. NORRIS,
Committee.

CLASS G.—FRUIT.

APPLES.

Your Committee have found the assortment of apples small, but considering the unfavorable year, very creditable to the exhibition:

CLASS I.—AMATEUR LIST.

No. 87. Henry Waldron, Pontiac, autumn seedling apples, 2d prem., ... $2 00

No. 1. Daniel Cook, Jackson, 8 varieties summer apples, ... 3 00

105. A. Hallock, Livonia, best ½ bushel winter do 3 00

190. Prince Bennett, Ypsilanti, best ½ bushel fall apples, .. 3 00

255. Wm. Tenbrook, Adrian, 9 varieties winter apples, ... 1 00

266. John C. Williams, Detroit, 17 varieties winter apples, 4 00

A lot of fall apples, from W. W. Myers, New Lisbon, Ohio, is noticed as worthy of cultivation, being the finest lot shown, Discretionary.

A beautiful lot of maiden's blush apples, from E. J. Benign, of Cass county, came too late to be entered.

The lots were generally small in quantity, not showing much liberality on the part of the exhibitors.

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PROFESSIONAL LIST.

No. 250. J. M. Sanford, Grass Lake, best and greatest variety of good table apples, ... Diploma and $5 00

No. 93. Hubbard & Davis, Detroit, a fine collection of apples, ... Discretionary.

GEO. E. POMEROY,
JOSIAH OSBORN,
Committee.

CLASS II.—AMATEUR LIST.

No. 238. H. A. Young, Detroit, best and greatest variety of good pears, named and labelled, .. Horticultural Review & $5 00

No. 296. H. Walker, " 2d best pears, Horticult'st & 3 00

117. Alexander Melvin, " 3d best pears, Hovey's Mag. & 2 00

95. Hubbard & Davis, " best 10 specimens peaches, .. 3 00

186. Prince Bennett, Ypsilanti, 2d best ten specimens of peaches, ... Downing's Fruits and Fruit Trees.

No. 109. A. Hallock, Livonia, best seedling peaches, ... $2 00

51. J. T. Willson, Jackson, 2d best seedling peaches, ... 1 00

189. Prince Bennett, Ypsilanti, best peck peaches, ... 3 00

191. " " 2d best peck " 2 00

320. John Winder, Detroit, best 12 quinces, ... 3 00

272. B. Phelps, Pontiac, 2d best 12 quinces .... Hovey's Magazine.

298. Hiram Walker, Detroit, 3d best 12 quinces, ... 1 00

158. J. L. Stout, Troy, best peck quinces, ... 3 00

113. Frederick Smith, Plymouth, 2d best peck quinces, .. 2 00

191. Prince Bennett, Ypsilanti, 3d best peck quinces, ... 1 00

22. Mrs. J. Palmer, Detroit, best collection of grapes grown in open air, ... 5 00

No. 104. E. Palmer, Plymouth, 2d best collection grapes grown in open air, ... Allen on the Grape and 2 00

No. 225. J. W. Frey, Three Rivers, best dish native grapes, ... 3 00

132. S. Lathrop, Adrian, 2d best dish native grapes, Allen on the Grape and 1 00

No. 8. Peter Staunch, Detroit, 3d best dish native grapes, ... 1 00

228. Thos. Palmer, " best collection foreign grapes grown in open air. 5 00

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No. 10. Peter Staunch, Detroit, best dish foreign grapes grown in open air $2 00
No. 306. T. G. Angel, Detroit, best collection foreign grapes, grown under glass, ... 5 00
No. 228. John S. Bagg, Detroit, best 4 water melons, ... 2 00
13. J. C. Holmes, " 2d best 4 water melons, ... 1 00
289. John S. Bagg, " best 4 musk melons, ... 2 00
13. J. C. Holmes, " 2d best 4 " 1 00
290. John S. Bagg, " best 4 nutmeg melons, ... 2 00
13. J. C. Holmes, " 2d best " " 1 00

PROFESSIONAL LIST.

No. 234. Wm. Adair, Detroit, best and greatest variety pears, 6 of each variety, ... 5 00
No. 159. S. B. Noble, Ann Arbor, best and greatest variety peaches, 6 of each variety, ... 5 00
No. 2. Daniel Cook, Jackson, best and greatest variety plums, 6 of each variety, ... 5 00
No. 3. Daniel Cook, Jackson, best and greatest variety nectarines, 6 of each variety, ... 3 00
No. 96. Hubbard & Davis, Detroit, best and greatest variety grapes, ... 3 00
No. 50. John Ford, Detroit, best seedling grapes, ... 5 00

This is a seedling of the black Hamburg, a very fine fruit.— *Western Horticultural Review.*

DANIEL COOK,
GEO. V. N. LOTHROP,
H. G. WELLS,
Committee.

CLASS G.—VEGETABLES.

The Committee on Vegetables, make the following awards:

No. 6. Harry Howen, Troy, roots for cattle, 9 varieties, ... $5 00
37. John Ford, Detroit, " " 7 " 3 00

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No. 25. Hubbard & Davis, Detroit, best peck white turnips, .. $3 00
No. 31. " " " sweet potatoes, .. 3 00
No. 301. T. G. Angel, " 2d " " .. 2 00
No. 224. Ferrand Gaines, " 3d " " .. 1 00
No. 33. Hubbard & Davis, " best ½ bushel yellow turnips, 3 00
No. 36. John Ford, " best collection vegetables, ... 5 00
No. 69. Wm. Smail, " 2d best " " ... 3 00
No. 37. John Ford, " best 12 blood beets, ... Transactions.
No. 40. " " best 12 stalks celery, Trans. & 2 00
No. 73. William Smail, " 2d best 12 " 2 00
No. 45. John Ford, Detroit, best 3 crook neck squashes, ... 2 00
No. 142. George Crabb, Detroit, 7 heads cabbage, Trans. and 2 00
No. 143. George Crabb, Detroit, best vegetable eggs, ... 1 00
No. 163. A. Streeter, Romeo, best turnip rooted beets, ... Transactions.
No. 176. Prince Bennett, Ypsilanti, best 12 parsnips, ... 1 00
No. 179. " " best peck red onions, ... 1 00
No. 204. Wm. Ball, Detroit, best bunch salsify, ... 1 00
No. 215. John S. Skidmore, Nankin, best peck red onions, ... 2 00
No. 279. John S. Bagg, Detroit, best peck tomatoes, Trans. and 2 00
No. 206. Wm. Ball, " 2d " " 2 00
No. 280. John S. Bagg, Detroit, best ½ peck Lima beans, ... 3 00
No. 209. Wm. Ball, " 2d " " 2 00
No. 75. Wm. Smail, " 3d " " 1 00
No. 284. John S. Bagg, Detroit, best table potatoes, ... 3 00
No. 284. " " 2d " " 2 00
No. 125. Luther Lapham, Farmington, 3d best table potatoes, 1 00
No. 70. Wm. Smail, Detroit, best 6 heads cauliflower, ... 2 00
No. 312. J. C. Holmes, Detroit, best autumnal marrow squash, 2 00
No. 26. Hubbard & Davis, Detroit, ½ peck sweet Spanish peppers, ... Discretionary.
No. 30. Hubbard & Davis, Detroit, Stowell's ever green sweet corn, ... Discretionary.
No. 35. Hubbard & Davis, Detroit, Scarlet short top radish, ... "

WM. H. LESTER,
JOEL P. MUZZY,
A. C. WALKER,
Committee.

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CLASS H.—GRAIN, FLOUR AND SEEDS.

The Committee on Grain, Flour and Seeds, award the following premiums:

No. 29. Levi B. Shaw, Kalamazoo, best sample winter wheat,.. $5 00
18. J. B. Vanatta, Ann Arbor, 2d best sample winter wheat, 3 00
19 " " 3d " " " " 2 00
11. J. B. Springer, Livonia Centre, ½ bush. yellow corn, Discretionary.
281. John S. Bagg, Detroit, best 2 bushels " " 5 00
13. Henry Waldron, Pontiac, 2d best yellow corn,..... 2 00
40. John Hutchins, Southfield, best sample oats,..... 3 00
Alexander Wattles, Troy, best sample seed corn, yellow f't., 1 00
20. J. B. Vanatta, Ann Arbor, best sample seed corn, white flint,..... 1 00
No. 124. D. M. Uhl, Ypsilanti, best sample seed corn,..... 1 00
71. Garret Tenbrook, Adrian, best sample barley, Trans. and 3 00
62. Geo. R. Hurd, Monroe, best sample beans, Trans. and 5 00
44. A. Streeter, Romeo, 2d " " " 3 00
282. John S. Bagg, Detroit, 3d best sample beans,..... 2 00
52. Prince Bennett, Ypsilanti, best sample peas, Trans. and 5 00
1. David Paddock, Pontiac, best barrel flour,...Trans. and 5 00
64. Samuel Hardinburgh, Nankin, 2d best barrel flour,... 3 00
24. Geo. Millard, Detroit, 3d best barrel flour,..... 2 00
21. W. C. Hughs, Milford, best barrel flour from the least quantity of wheat,.....Trans. and 5 00
No. 22. L. Canfield, Redford, best 2 loaves milk rising bread, 2 00
45. A. Streeter, Romeo, 2d best 2 " " " " 1 00
3. John Gray, Dearborn, best sample corn bread,..... 2 00

H. BAXTER,
J. B. SPRINGER,
B. FOLLET,
Committee.

CLASS I.—MISCELLANEOUS ARTICLES.

The Committee on Miscellaneous Articles, would most respectfully report, that they received their Committee Book at a quarter before 12 o'clock M., on Thursday, the 29th, and found it contained a list of one

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hundred and ninety-one articles, from the complicated machinery—intricate mathematical instruments, evincing much scientific and mechanical skill—to a jar of molasses candy.

Your Committee had about eight hours to make their examinations; it is needless for them to say that it was totally impossible for them in that short time to do justice to the exhibitors of the various articles in their list, or to do justice to themselves. We recommend the following awards:

No. 1. H. Canfield, Akron, Ohio, improved printing press, Silver Medal.

No. 2. Henry Miller, Detroit, fine cut chewing tobacco, ... Diploma.

3. Charles Ross, Rochester, New York, Ross' burr stone flouring and feed mill, ... Silver Medal.

No. 5. W. Wingert, Detroit, target rifle, ... Medal.

8. A. Day, " Lewis's screw cutter, for bedsteads, ... Silver Medal.

No. 14. W. & A. Shulters, Detroit, marble mantle piece, the best of its kind, ... Silver Medal.

No. 17. Wm. Fewins, Detroit, knotted parting wig, single hair, upon open lace, ... Silver Medal.

No. 24. Edwards, McKibbin & Co., Detroit, mantle pieces, Diploma.

29, 30. Mrs. Larzalere, Adrian, piano spread and ottoman cover, ... Diploma.

Nos. 34, 39. E. & T. Fairbanks, St. Johnsbury, Vt., platform and other scales, ... Diploma.

No. 40. A. Picket, Winneconne, Wis., Woolman's gate operator, ... Diploma.

No. 41. J. Rankin, Detroit, collection engine brasses, ... Discretionary.

42. W. Bostwick, " fancy pails, ... "

44 to 49. Baxter & Gallagher, Detroit, assortment of cordage, ... Bronze Medal.

No. 50 to 54. C. & P. Mellus, Detroit, assortment of mill, circular, and hand saws, ... Silver Medal and $5 00

No. 55. S. S. Barry, Cleveland, Ohio, Avery's sewing machine, ... Diploma.

No. 56. Burt & Bailey, Detroit, case mathematical instruments, Disc'ry.

No. 57. S. Bowerman, Detroit, vase artificial flowers, ... 3 00

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No. 59. Swift & Seymour, Detroit, case Misses and Ladies gaiter shoes,..... Discretionary.
No. 61. A. Valentine, Detroit, case jewelry, Diploma & Bronze Medal.
No. 64. Miss Caroline French, Detroit, 1 bracket leather work, Bronze Medal.
No.'s 65, 66. Mrs. J. Palmer, Detroit, currant wine,..... $3 00
No. 67. Cabinet-Maker's Association, Detroit, rose wood work table,..... Medal and 5 00
No. 68. Cabinet-Makers' Association, Detroit, dressing bureau, Disc'ry.
No. 69. C. King, Sterling, curled maple and black walnut bureau,..... Bronze Medal and 3 00
No.'s 70, 71. R. L. Barrowman, Detroit, case hats, caps and furs, French hat conformateur,..... Medal.
No. 73. Detroit Melodeon Company, Detroit, 3 melodeons,... Medal.
No. 74. Geo. Schuler, Detroit, French clock, glass case,.. Bronze Medal.
No. 75. Daniel Kellogg, Saline, combination mill,..... Silver Medal.
No. 77. J. S. Vernor, Detroit, hot air furnace and cooking range, Diploma.
No. 79. E. Kanter, Detroit, dozen bed cords,..... Medal.
No. 80. M. St. John, Kalamazoo, 3 specimens book binding, Discre'ry.
No. 81. J. L. Stout, Troy, 113 specimens wool,..... Discretionary.
No. 82 to 84. Palmer & Whipple, Detroit, bank ledgers,.... Diploma.
No. 85. Chas. Piquette, Detroit, case of gold pens,..... Silver Medal.
No. 87. B. Lee, Detroit, candies,..... Discretionary.
No. 89. T. H. Armstrong, Detroit, Masonic and other regalia, Diploma and Medal.
No. 90. J. Godfrey, Paw Paw, bottle grape juice,.. Trans. and Medal.
No. 91. O. S. Allen, Detroit, cage Canary birds,..... 2 00
No. 94. W. T. Baker, Detroit, horse hair mattress,..... Medal.
No. 95. H. Schlack, Ann Arbor, 2 barrels glue,..... Diploma.
No. 96. J. B. Bloss, Detroit, marbleized iron mantles,..... Diploma.
No. 102. Wm. E. Peters, Detroit, Italian marble head stone, lettered,..... Medal.
No. 112. T. Kanter, Detroit, 6 bunches fish lines,.... Bronze Medal.
No. 117. W. Phelps, Detroit, case of confectionary,..... Diploma.
No. 118. P. Hamilton, Detroit, Arnold's patent sash lock,... Diploma.
No. 119. O. Goldsmith, " lot of cigars and tobacco,.... Diploma.

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No. 121. M. H. Webster, Detroit, Otis' improved lightning conductor, ... Bronze Medal.

No. 122. Guile & Allison, Detroit, case of gold pens, ... Diploma.

123. J. A. Allison, Detroit, pocket chronometer .... Dip. & Medal.

124. F. M. Eldred, " brackets of leather work, ... Diploma.

125 to 138. D. E. Rice, Detroit, wood lathe and circular saw arbor, ... Medal.

No. 129. A. Gage, Adrian, two lbs. printer's ink, ... Bronze Medal.

130. J. M. & F. M. Mertenstein, Detroit, one barrel glue, .. Dip.

131. S. D. Blood, Kalamazoo, spring bed, ... Medal.

137. Owens & Worden, Detroit, four boxes of crackers, Bronze Medal.

No. 150. Atkinson & Co., " five pier mirrors, ... Diploma.

144. " " " twelve rolls paper hangings, ... Diploma.

No. 155. C. A. Crary, Columbia, whiffletree hook, ... Diploma.

151. Wm. Cahoon, Pontiac, case of dentistry, ... Transactions.

159, 160. D. T. Barrett, Detroit, ruffled and plain shirts, Diploma.

168. George Winter, Detroit, two fur over-coats.

172. H. J. Alvord, " specimens of tobacco, .. Discretionary.

173. Eliza Ingersoll, Farmington, three palm leaf hats .. Diploma.

175. George Clarke, Monguagon, 14 varieties fresh fish $3 00

176. Doctor Rudolph, Detroit, cage of French Canary birds, ... 2 00

No. 177. Mrs. M. C. Cuningham, Detroit, muff and tippet, ... Medal.

179. F. Buhl & Co., Detroit, collection of fur goods, in case, ... Diploma.

No. 180. Burt & Bailey, Detroit, surveyor's instruments, Bronze Medal and Diploma.

No. 183, 184. N. Longworth, Cincinnati, Ohio, specimens of Catawba and Isabella sparkling wines, ... Medal.

Nos. 185, 186. N. Longworth, Cincinnati, Ohio, specimens of still Catawba and sweet wines, ... Diploma.

No. 188. T. M. Cook, Detroit, case native copper, ... Diploma.

189. J. E. Kitton, St. Clair, mill saw, ... Silver Medal.

190. " " " bunch sawed shingles, ... Diploma.

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No. 191. H. Metz, Detroit, fire-proof roofing,.....Silver Medal.

J. E. KITTON,
JAS. C. WOOD,
J. A. BAILEY,
J. M. LAMB,
Committee.

FIELD CROPS.

The Committee on Field Crops, report that but four statements of crops have been received by the Executive Committee, viz: one a crop of oats raised by Munson Hurd, of Frenchtown, Monroe county; one a crop of corn raised by S. M. Bartlett, of Lasalle, Monroe county; one a crop of corn raised by John Starkweather, of Ypsilanti, Washtenaw county. The committee having examined these statements, awarded to Munson Hurd the first premium for the best crop of oats,—Coleman's Tour and $5; to S. M. Bartlett, for the best crop of corn, the first premium,—Medal and $8; to John Starkweather, for the second best crop of corn, the second premium, Transactions and $5.

To Aaron Eames, of Kalamazoo, for a crop of potatoes; although the statement is not so full as desirable, the committee award to him a premium of $5.

JAY R. MONROE,
THOMAS CLARK,
C. W. GREEN,
Committee.

ESSAYS.

The Committee on Essays, beg leave to report that the Essays submitted to them for premiums were thirteen in number, upon the following subjects:

No. 1. On the cause and cure of the Potato Rot.

No. 2. On the culture of the Potato.

No. 3. On the culture of Indian Corn.

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No. 4. On the manufacture of Cider and Apple Sauce.

No. 5. On the curl of leaf of the Peach tree.

No. 6. On the culture of Wheat.

No. 7. On the Moth or Apple Worm.

No. 8. On the Curculio or Plum Weevil.

No. 9. On the culture of Potatoes.

No. 10. On the culture of Potatoes.

No. 11. On the cultivation of Indian Corn.

No. 12. On the Common Potato, its culture, disease, and remedies.

No. 13. On the Potato Rot.

It was a matter of no small difficulty with the Committee, to examine and decide upon the relative or intrinsic merits of such a number of essays; and the more so, where several of them were upon the same subject. The greatest embarrassment lay in adopting a just and proper rule of decision. If the Committee were to act upon the principle that they were merely to decide which was relatively the *best* essay, on a given subject, they would have had a rule of simple and easy application; but under such a rule they might have awarded a premium to an essay quite unworthy of it, simply because it was the best one submitted to them.

After much reflection, the Committee came to the conclusion that in order to justify them in awarding a premium, the essay entitled to it would come essentially under one of the following rules:

1st. It should contain facts, or establish a principle before unknown, or not generally known; or, at least, if it established no new principle, that it should give facts or experiments explaining or illustrating those already known, or tending to establish what was before doubtful.

2d. Or if it profess to establish no new fact or principle, nor give any new illustration of what is already known, it should at least, embody and classify, in an unusually clear, concise and authentic manner, whatever is known upon the subject of which it treats; it should avoid all vague and uncertain theories and conjectures, and be well sustained by established facts of general authority in the agricultural community.

Under these rules, which the Committee regard as the safest they could adopt, they have, after careful examination, agreed to recommend that premiums be awarded for the following essays:

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To E. C. Roberts, of Salem, for the essay on the cause and cure of the Potato Rot, $15 00.

To N. Davidson Redpath, of Fogo, Allegan County, for the essay on the Common Potato, its culture, diseases and remedies, $15 00.

JOHN S. BAGG,
THOMAS POPE,
MORGAN L. FITCH,
ISAAC P. CHRISTIANCY,
Committee.

COUNTIES.

The Committee on Counties, report that the Committee to whom was referred the premium list, in order to ascertain the amount of premiums awarded to each County, and to award the premium offered to the County obtaining the greatest amount for property exhibited, reference being had to the population, and the distance of the County from the place of holding the Fair, after a careful examination of the same, have awarded to the County of Macomb, twenty volumes of the Transactions of this Society, as being entitled to the same under the rules.

A. Y. MOORE,
S. M. BARTLETT,
Committee.

CROPS OF CORN.

S. M. BARTLETT'S STATEMENT.

The undersigned presents the following statement of a crop of Corn, raised by him the present season, in Lasalle, Monroe County, Michigan:

The field contains about fifteen acres; the soil varying in texture from dark sand (in the higher portions) to stiff clay in the lower, with every shade of mixture at different elevations. The entire field was well underdrained two years ago; has been under culture more than twenty years; no manure has been applied for the past three seasons.

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The land was plowed (but once for this crop,) to the depth of nine inches—was planted in rows eight feet apart, seed four inches apart in the rows, with the "Indian Yellow Dent;" four quarts of seed to the acre.

The cost of raising the entire field, was as follows:

May 14.	To 7 days plowing, 16s per day,		$14 00
" 19.	" 2 " harrowing " "		4 00
" 21.	" part of day planting, with Emery's drill and a horse,		1 25
" 30.	" 2 days harrowing the coming corn,		4 00
June 11.	" 2 " 1 horse cultivator, each side of rows,		3 00
" 24.	" 2 " " " " " "		3 00
" 25.	" 1 " 2 horse wheel cultivator on baulks,		2 00
July 27.	" 2 " 1 horse wheel cultivator, each side of rows,		3 00
" 28.	" 1 " 2 horse wheel cultivator, on baulks,		2 00
Aug. 5.	" 5 " weeding in rows, by hand,		5 00
Total cost of ripe crop,			$41 25

On the eleventh day of October the yield of three acres of this field was carefully tested—the largest yield of ears per acre was found to be 175 bushels, the least 160 bushels; the average being 167½ bushels. Enough of the corn so gathered was then shelled, to satisfy the examiners that 1½ bushels of ears equalled 1 bushel of shelled corn—fixing the yield at 110¾ bushels per acre; to which statement of yield, affidavit was made by Geo. Graham, Esq., and the undersigned, and presented to the Committee on Field Crops in Monroe County.

S. M. BARTLETT.

December, 1853.

CROP OF CORN.

JOHN STARKWEATHER'S STATEMENT.

To the Executive Committee of the Michigan State Agricultural Society:

My farm is situated in the township of Ypsilanti, Washtenaw county, on the River road, one and a half miles from the village, leading to Ann Arbor. The ground selected for corn culture the past season, and which I offer for your premium, had been seeded with clover and timo-

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thy four years previous, and mowed three years in succession for hay; each year it being plastered at the rate of 70 pounds to the acre, the balance of the time used for sheep pasture. The soil is a sandy loam, subsoil clay. The surface is slightly undulating, presenting a southwesterly inclination of ten feet to forty rods. The ground was intended for wheat culture one year ago the past season, and twenty loads of stable and sheep yard manure had been hauled out the winter and spring previous, and left in heaps of five to the load, eighteen feet apart. During last winter and spring, an additional twenty loads to the acre was hauled out and put on the heaps before made, making in all forty loads to the acre, three-fourths of a cord to the load. April 20th, commenced spreading the manure evenly, also plowing with a three horse team, turning a furrow slice eight inches deep and twelve wide, leaving it on an angle of forty-five degrees. May 8th, dragged with fine light drag, lengthwise of the furrow, laping half. Marked out each way four feet apart; planted May 13th and 14th, the yellow dent corn, five and six kernels in a hill, the corn having been soaked in ham brine, made half water, and blood warm, twenty-four hours previous; after which, half pint of tar made warm was thoroughly incorporated with half a bushel of corn, then rolled in plaster. It came up in ten days. The spring was unfavorable for quick germination, being cold and wet. June 2d, commenced cultivating lengthwise of the furrow, twice in each row, then hoed, and reduced the plants to three in each hill, and sowed 80 pounds plaster, per acre, broadcast.

June 15th, commenced cultivating the second time, once in a row each way, and hoed thoroughly, leaving the ground nearly level. July 5th, commenced cultivating the third time, once in a row each way. Previous to the last way, quarter of a pound of globe and flat turnip seed was sowed to the acre. There were no weeds on the ground. September 1st, commenced cutting up corn close to the ground, putting twenty-five hills in a stook. Husked in October and November. It yielded one hundred and thirty bushel of ears to the acre, being six hundred and sixty-five in all. One and a half bushels of ears making one bushel of shelled corn, being at the rate of ninety bushels of shelled corn to the acre. Sixty-four pounds of this corn when properly dried in the ear, will yield fifty-six pounds of shelled corn.

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In addition to my corn crop, I obtained over five hundred bushels of turnips of excellent quality. The stalks have been carefully saved, there being thirteen large loads, which I consider worth twenty-five dollars.

The past season was highly unfavorable to the growth of the corn crop, owing to the severe and protracted drouth. It may be proper to add that I consider our soil and climate well adapted to corn culture, and that no crop pays better for extra care and high manuring, or affording a greater amount of food for man and beast.

All of which is respectfully submitted.

JOHN STARKWEATHER.

MANAGEMENT OF FARMS.

The undersigned Committee, appointed by the Executive Committee to examine the statements of persons making application for premiums for the best conducted Farms, in accordance with the requirements of the Society, beg leave, most respectfully, to make the following report:

That for the premiums to be awarded for the best cultivated Farm—reference being had to the cultivation, stock, improvements, expenses, products, &c.—there are but two competitors, Mr. Linus Cone, of Troy, Oakland County, and Mr. C. W. Green, of Farmington.

From a careful examination of the answers to the many interrogatories of the Executive Committee, your Committee find that the Farm of Linus Cone, consists of 105 acres—62 acres improved; the soil a stiff clay loam, with limestone gravel interspersed; sub-soil of nearly the same composition; some low lands, containing more vegetable mould, and more easily tilled.

Deep plowing (and in some instances to the depth of 20 inches,) is found to be most productive; usual depth of plowing 12 inches. The mode of cultivation is to plow but once.

The average product of this Farm for three years, was 36 bushels Wheat, 33 bushels Barley, 59 bushels Oats, and 122 bushels ears of Corn per acre.

Made no experiments to show the relative merits of different breeds of Horses, Cattle, or Sheep and other animals.

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Daily accounts are registered with each field, including debt and credit, and all other transactions of the Farm.

The receipts for Farm products for three years have averaged		$1,200 00
And the expense of cultivation, wear and tare of tools, expense of keeping the Farm in repair, and all expenses of the family, estitmated at		650 00
		$550 00

Leaving $550 as the reward of his labor and experiments from about 35 acres of tilled land.

The Farm of Mr. Green contains 160 acres—120 acres improved. The soil a sandy loam, generally with clay sub-soil, with limestone gravel interspersed.

It is found that this soil improves much by deep tillage, stocking down to clover, and 50 lbs. of plaster ℔ acre yearly.

By experiment it was found that upon this soil, with once plowing, 5 inches deep, only 15 bushels Wheat ℔ acre was produced. Same soil plowed 10 inches deep, with other tillage, yielded 30 bushels ℔ acre.

The Double Plow or Jointer, is most in use upon this Farm, and most suitable for deep plowing. Plows but once for all crops.

The receipts of this Farm, as per detailed exhibit, for the past year, amounts to the sum of		$1,672 50
Interest on the value of the Farm	$350 00	
" " $1500 worth of stock, &c.,	105 00	
Wear and tare of tools, and other expenses, estimated at	179 00	634 00
		$1,038 50

Leaving the large sum of $1,038 50 as the reward of his labors and experiments upon 120 acres of improvements, as it would appear from his statement.

From a careful examination of the statements of Messrs. Cone and Green, your Committee have arrived at the conclusion that the Farm

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of Linus Cone is entitled to the 1st premium, and that of Mr. Greene, the 2d, and would recommend the same accordingly.

P. K. LEACH,
CHARLES DICKEY,
THOMAS CLARK,
Committee.

LINUS CONE'S STATEMENT.

In reply to the questions proposed by the State Agricultural Society, to competitors for premiums for the best cultivated farms, the following answers are respectfully submitted:

SOILS, &C.

1. *My farm contains 105 acres, of which 62 acres are improved; 10 acres of wet land, mostly cleared and in grass; 5 acres, with timber mostly cut off, and the remainder in wood. There is now no waste land on the part improved.

2. The soil is a stiff clayey loam, with gravel intermixed. The subsoil is nearly the same composition, to the depth of several feet. About one half of the farm is on a ridge running north and south. On this part the soil is of a very hard and compact character, and difficult to work, but that on the less elevated part contains more vegetable mould, and is more easily tilled. There is no lime-stone, but a considerable portion of the gravel is lime, as it proves on being burned.

3. The best method of improving this soil, I have found to consist in deep plowing, thorough pulverization by the repeated use of roller, harrow, and cultivator, together with ample manuring, care being taken to have the soil thoroughly drained by under or surface drains.

4. The usual depth of plowing is one foot, and is necessary to plow even deeper than that on some of the low ground, in order to prevent wheat from being injured by winter and rust.

5. I have conducted no accurate experiments to ascertain the precise difference between a crop on land deeply plowed, and on that plowed the ordinary depth. But when land has been first plowed nearly twice the ordinary depth early in the season, for wheat, or in the fall, for crops

*The questions to which these answers are given, may be found on pages 30, 31, 32 and 33.

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the ensuing spring, the crops have invariably been estimated at nearly double what they were when the same land was plowed five or six inches deep.

6. I have used the sub-soil plow on two fields only. One, where the ground was undulating, sub-soiled twenty inches deep when the ground was dry, and sowed to wheat, produced less straw but more and better grain; and since then, when in meadow, seeded with clover and timothy, when pastured with sheep late in the spring, has produced more than three tons of hay annually to the acre. This land would not have produced more than one-third as much hay the last two dry seasons had there not been more than the common depth of soil for the grass roots to penetrate. This was proved by the crop on the field adjoining. The other field was nearly level and only in part sub-soiled, and that done when the ground was rather wet. This land did not produce a medium crop for two years afterwards, and not until it was under-drained. It is now productive. There was considerable wet land in small basins and swails. These have nearly all been drained with under-drains, constructed with stone and tile, but mostly stone. Several of these drains have been extended into the highest and dryest land. The results have in all cases been highly beneficial, making the soil of the high land more open, and easier tilled, and consequently producing better crops, and that of the low land which had before been unproductive, the most productive and valuable part of the farm.

7. The trees indigenous to the soil were for the most part white, black, and yellow oak, white ash, black walnut, hickory, basswood, butternut, red elm, and thorn on the dry land, and black ash, water elm, soft maple, sycamore, and balm of gilead on the wet. The plants were very numerous, among which were oxbalm, sarsaparilla, cowslip, and marsh grass.

MANURES.

8. From 25 to 35 loads of manure (30 bushels to the load) are usually applied to the acre, the quantity depending somewhat upon the quality and state of the manure and the crop to be grown upon the land. The main part of the manure is left in the stables where made, until wanted for use. What accumulates during the winter in the yards, if not used in the spring, is piled up and covered with muck or soil.

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9. As a considerable amount of muck, leaves from the woods, sawdust, and coal dust is used in the stable and yards, to absorb the liquid manure, there is but little of what is generally called long manure, and might more properly be called compost. It is generally used on land intended for wheat or corn, and if quite fresh, I prefer plowing it in; if not, experiments have shown that it is as well to cultivate it in after plowing.

10. Plaster has been used freely as a top-dressing for wheat, corn and grass; and sometimes in composting manures. The effect on corn and grass, when put on early in the season, has always been highly beneficial, and generally on wheat when sown in the fall, at the time of sowing the wheat, or when sown very early in the spring; but when applied late in the spring it sometimes has had no apparent effect, and at others has caused too luxuriant a growth when the wheat was maturing, causing rust and shrinkage of the grain.

TILLAGE CROPS.

11. Generally about one-half of the farm has been under tillage, but in consequence of the scarcity of help, I have been gradually changing for a year or two past, and am now tilling less. In 1851 there was 33 acres in the following crops: 14 acres in wheat, 7½ in barley, 5 in oats, 5 in corn, 1½ in turnips, carrots and beans. In 1852, 9 acres in wheat, 6 in barley, 3 in oats, 5 in corn, 1 in turnips and carrots. The present year, 11½ acres in wheat, 6 in barley, 3 in oats, 5 in corn, 2 in turnips, beans, and corn for fodder. There is now on the ground 8 acres of wheat, and ¼ acre of winter barley.

12. Two bushels of wheat are sown to the acre when sown broadcast, and one and a half when put in with a drill; two and a half bushels of barley, and from 3 to 4 bushels of oats. Corn is planted from 3 to 3½ feet apart, leaving three stalks in a hill. Yellow northern corn is used. The time for sowing wheat is the latter part of September, or as soon as the weather becomes cool. The time to sow barley is as soon as the ground will admit, sometimes in March, but not generally until April. Corn does best, and is easiest tended, when not planted until the latter part of May. The mode of cultivating is to plow but once for a crop, (always the same way of the field to facilitate drainage,) and to *thoroughly mix and pulverize* the soil, by repeatedly stirring it with the implements commonly used for that purpose. The method of har-

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vesting is that generally practiced, except much of the wheat and some of the oats have had to be cut with the sickle. Corn is always cut up at the roots and set in stooks to save for fodder. There is no great variation in the yearly amount of product per acre, and what there is, is caused by the condition of the soils, some years it being more highly manured, and better tilled than others. The difference in the seasons has very little effect on the crops. The average product per acre, for three years preceeding the present, (that not being all threshed and measured yet,) was wheat 36 bushels, barley 33, oats 59, corn 122, in the ear. The Hessian fly nearly destroyed a field of early sown wheat when that insect first made its appearance in this State, many years since. From that time sowing has been deferred until cool weather, which has saved the crop from further injury from that source.

13. When land is plowed one foot deep with a narrow furrow, the furrow slice will stand nearly on the edge, with the manure between the furrows. This, in the after cultivation, of six or eight inches deep, will, to that depth, thoroughly intermix it with the soil. Fine manure spread on the surface after plowing, will also become intermixed with the soil as deep as the cultivator is permitted to run. Manure is sometimes used as a top-dressing, but this is attended with loss unless applied in cloudy or wet weather.

14. Potatoes have been affected with the rot, and after trying several recommended remedies for that disease, to no purpose, their cultivation has been nearly abandoned. No disease has affected potatoes the two past seasons.

GRASS LANDS, &C.

15. Red clover and timothy seed are used. Clover seed is generally sown in the chaff at the rate of eight or ten bushels, with four quarts of timothy seed, to the acre. Grass seed is sown on wheat in March, and with spring grain at the time of sowing the grain, and the ground then rolled, unless the weather is rainy. All land is seeded whenever cropped with small grain. White clover abounds in the land to a considerable extent, and is better than red for dairy purposes.

16. As land is kept in grass only a year or two at a time, the amount varies. The last two seasons, seven and three-fourth acres, including about one acre of fence corners, constituted all my mowing lands. The production varies from 2 to 3½ tons per acre. Grass is cut when the

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clover is in blossom, and put in cocks the same day it is cut, and left in that state, if the weather is fair, until fit to house.

17. I have no mowing lands unsuitable for the plow; all such lands have been drained.

18. The answers to these questions will be found in the answers to question six.

19. The weeds that have been most troublesome were chess, cockle, and dock. By expending a great amount of labor, the two former have been eradicated, but I think, as far as dollars and cents are concerned, that this labor has been nearly thrown away. Such has heretofore been the character of our wheat market, that wheat containing chess and cockle, has uniformly sold for as much as clean wheat. Dock, like the others, got the start before I was aware of the necessity of preventing its growth; some of it still remains, but it is decreasing, and I hope soon to eradicate it entirely. Pulling up and burning is the only sure way to destroy weeds.

DOMESTIC ANIMALS.

20. I have now (which is about the number generally kept,) 2 yoke of oxen, 2 cows, 1 three year old steer, 3 yearlings, and 2 calves. Of horses: 1 pair work horses, 1 brood mare, and 1 yearling colt. About one half the cattle are Native, the other half have a mixture of Durham blood.

21. I have made no experiments to show the relative merits of the different breeds of cattle or other animals.

22. I think the cheapest and best way to winter cattle is to keep them in stables without a floor, letting the animal have its liberty. These stables, or "boxes," to have coal dust, muck, leaves, or some other substance first put in, to absorb the liquid manure, and afterwards to be kept well littered, leaving the manure in the stables until wanted for use. The cheapest and best forage for stock, I consider to be well-saved corn stalks, the straw of early cut grain, together with roots, corn and barley meal, with a small amount of hay. It is very important that water should be near, either in the stables or in the yards adjoining.

23. No account is kept of the product of the cows kept on the farm, as that is mostly consumed in the family.

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24. The number of sheep heretofore kept on the farm has varied from 90 to 100. At present there are 152. They are of the common Spanish Merino. The weight per fleece has increased from 4 to 4¾ lbs. within four years. The wool last year sold for 46 cents ℔ lb., this year for 55 cents. From one-third to more than one-half the sheep produce lambs; the number is yearly changing. About 90 ℔ cent. of the lambs are usually reared; this year had 62—all raised. The price of sheep sold to the butcher, has varied from $1 50 to $4; lambs are never sold.

25. The best and cheapest manner of wintering sheep I think is to confine them in dry, well ventillated stables, without floors, and to have water accessible at all times. The feed to consist of a small feed of hay or corn stalks once a day, and plenty of straw at other times; some kind of roots to be given twice or thrice a week, and perhaps a little grain daily. With this feed sheep will keep in first rate order, and even increase in flesh during winter. I have practiced this method of wintering sheep for the three last winters, which has convinced me that it is a plan which might be adopted by all, to advantage. My sheep have uniformly been healthy, having lost but one during the three years, and that one died during the summer.

26. I keep but few swine, fatten yearly from five to eight. They are of a mixed breed, it would be difficult to tell what. They have been crossed annually with the best breeds in this vicinity. They are fed with the slops of the kitchen, run in clover pasture in summer, and are fattened on barley or corn meal, or corn, fed in the ear. Those killed at eighteen or twenty months old, have weighed over 350 pounds, and those at fourteen months, about 300 pounds each.

27. I have made no experiments under this head.

FRUIT.

28. The orchard contains 48 apple trees and 3 pear trees, of over 30 years growth, and 70 apple trees, of from 5 to 8 years growth. All the fruit trees have been engrafted. The old trees are chiefly of the following varieties: early harvest, early joe, early bough, early strawberry, fall pippin, fameuse or snow, Westfield seek-no-further, R. I. greening, swaar, esopus spitzenburg, and Roxbury russet. Several of the largest trees have been engrafted with the northern spy, but they are not yet in full bearing. The young trees are Roxbury russet, northern spy, and spitzenburg, with a tree each, of some fifteen other varieties.

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29. There are of other kinds of fruit, 70 trees, mostly young. They are of the most highly recommended varieties of the different kinds, but they have not yet been in bearing a sufficient length of time to speak confidently of their merits.

30. No insects have attacked the trees but the borer; they have been cut out and destroyed without materially injuring the trees. My old apple trees have for some years past been affected with the frozen sap blight, which has destroyed several, and greatly injured others. For reasons which I have not room here to mention, I have become impressed with the belief that the trouble was caused by excess of water in the soil, and to remedy it, last summer nearly the whole orchard was thoroughly drained, with drains three feet deep. This will test the matter. The apple worm has for two seasons past, destroyed or greatly injured nearly all my apples and pears. They have been far more destructive to my fruit than to the fruit of others in this vicinity, who have taken much less care of their trees. The habits of this worm are not yet known, therefore no successful warfare can be waged against them.

31. The orchard has been cultivated and well manured, cropped with corn, beans, and root crops, not planting near the trees. The trees have been annually pruned, scraped, and washed with lye. They have been occasionally mulched with partially rotted straw.

32. I have been experimenting, with the variable success that attends all experimenters, for more than twenty years, but the limits of this paper will not permit entering upon that subject here.

FENCES, BUILDINGS, &C.

33. My farm buildings are all of wood; the dwelling house is two stories high, 26 by 30 feet, with wing one story and a half, 17 by 20—wood house attached, 18 by 30, with bed room and cook room in wood house; well room attached—12 by 14; cellar under main part and wing. The grain barn is 30 by 74 feet, with stables in the lower part of 30 feet of it. Grainery 13 by 14, attached to barn. Sheep barn 28 by 74, with loft for hay. Carriage house and horse barn, 30 by 30, with loft for hay; a shed adjoining, 13 by 30, for wagon and tools. Hog-pen 20 by 30, with a loft above for corn, and a room below for tools; some temporary stables, 14 by 30; and hen house 12 by 12, completes the list of buildings. The dwelling house, horse barn, and hog-pen, are painted.

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34. The fences around buildings, garden and yards, are of posts and boards, in part painted. I have a few rods of wire fence, but don't think much of it. The main fences are built with large oak rails, eight rails high, and when built were about six feet high. Some of this fence has been standing twenty-seven years, without repairs, and is now good. There is no doubt but that a large part of the fences will last, with few repairs, fifty years from the time they were built. There are good substantial gates to all the enclosures save one: one pair of warping bars yet. The exact length of the fences, and the cost of construction, I cannot give.

35. All small grain is weighed or measured. Corn is estimated from a single wagon load, measured, or that from a certain number of stooks. Roots are measured. Hay is estimated by the load. Daily accounts are registered, including debt and credit, with each field, which are numbered, and all transactions of the farm, state of the weather, &c., except the products of the dairy, and what fruit and vegetables are consumed in the family. Of these, no account is kept.

36. Not being a book-keeper, my mode of keeping books is probably not the best or most accurate. It is simply this: a book is kept where all the transactions of the farm, as above mentioned, are daily registered. Another where receipts and expenditures are entered, and items specified. From these books, the results for the year are ascertained, when the product of that year are sold, and not until then, as estimates in matters of this kind are not always reliable. And further, as this method of keeping books was at first adopted mainly to ascertain the profits of each crop, and to see what remained, after a living for self and family, the items of family expenses have been generally passed by and not taken into the account in footing up. The practice of keeping regular farm books, by all who are capable, especially by the young, would, without doubt, lead to better methods of farming and make it more satisfactory, and greatly increase the profits.

37. It will be seen by what is stated above, that to this question (perhaps the most important of the whole) a definite answer cannot be given. Reasons, in addition to the above, are, a part of the products of the two last years remain unsold, and team, tools, and board for help to carry on an adjoining farm (not my own) have been furnished, and no account kept. These, if added, would greatly increase the profits. I

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will however make a general statement, (although I dislike guess work in matters of this kind,) founded on the data of previous years, and estimates for the present and last, which will be nearly correct:

The receipts for farm products annually sold,	$1,200
The expenses of cultivation, wear and tare of tools, and expenses of family,	650
Leaving as profits, besides a living,	550

Not having been able to labor much myself, for some years past, most of the farm labor has been hired. The present year much of the labor has been done by myself, which will increase the profits for this year.

I have thus answered the questions in detail, as directed, and have extended this paper to a great length, and will close by making a few remarks.

I purchased this farm, or the greater share of it, in 1825; it was then new, heavily timbered, with a hard clayey soil, much infested with stones, large boulders, and oak and hickory grubs. The timber was removed with my own hands. Depending alone on the products of this new farm for the support of myself and family, I then thought it necessary to crop yearly, all the land cleared. This continued cropping, in a few years, rendered the land comparatively unproductive, crops uncertain, and profits small. Some seventeen years ago, I changed my method of farming to one more thorough and systematic, removing obstructions to the plow, tilling deeper, draining, &c., and have thus doubled the amount grown per acre, rendered crops certain, profits greater, and results altogether more satisfactory. But these improvements, and the experiments which have led to them, have cost a large amount of both time and money. Now, the main question is, will like improvements pay? Is it as well for the farmer to invest his money in his own *bank*, where it will be returned with interest when called for, or to invest it in something unproductive and perishable?

LINUS CONE.

Troy, December 1, 1853.

Note.—A plan of the farm will be found in 3d Volume of Transactions, page 176.

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C. W. GREENE'S STATEMENT.

1. The Farm consists of one hundred and sixty acres—one hundred and twenty acres improved, forty acres timbered.

2. The soil is sandy loam, generally; sub-soil, clay, sand and gravel, in various proportions, according to location. There is limestone, usually found in the form of gravel.

3. To improve the soil of my farm—deep tillage, then stocking down with clover, add plaster, fifty pounds per acre; and depasturing with sheep, I consider the most economical method for sandy or gravelly soil.

4. I plow from eight to ten inches; it gives capacity to the soil, which enables it to resist the evil effects of extreme wet or protracted drouth.

5. I have made the following experiments in relation to deep plowing:—Sandy soil plowed five inches, produced fifteen bushels wheat per acre; same soil plowed ten inches, gave thirty. Clay loam plowed four inches, produced wheat, ten bushels per acre, and same soil plowed ten inches, twenty-five per acre. The lands upon which these trials were made, had been tilled for twenty years previous, without having been recruited.

6. I use the double plow or jointer for green sward, stubble ground, and in all cases for plowing under manure; it is *the* plow for general use, in all soils with which I am acquainted; have drained no lands; have but little that requires it.

7. The trees indigenous to the soil, were white, red, and swamp oak; white, black, and blue ash; red and white, or swamp elm; white-wood, bass-wood, beech, sugar maple, black walnut, butternut, and cherry, with several other varieties in less abundance. The plants indigenous to the soil, are as follows: blood-root, mandrake, adder-tongue, several varieties of balm, wild turnip, &c.

MANURES.

8. I apply twenty loads of manure to the acre; all that accumulates in yards during winter, is removed to the field and plowed under for spring crops.

9. For sandy soil I prefer plowing manure under in its green state.

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10. I have used plaster for wheat and clover, sown in April, 60 lbs. ℔ acre, and in every case with marked results.

TILLAGE CROPS.

11. Thirty acres are tilled the present season—ten in wheat, fifteen in corn, five in oats, potatoes, &c.

12. For all crops I plow but once—from eight to twelve inches deep; the harrow and cultivator then does up the work. My wheat is sown from the twenty-fifth of August to the tenth of September; one bushel and eight quarts per acre. Average yield for the last three years, 25 bushels per acre. My corn is planted about the 20th of May—six quarts to the acre, and thinned out if required. As soon as the rows can be followed without difficulty, the cultivator is started, and run as long as there is a weed or a blade of grass to be seen, during the season. The corn is cut up at the ground as soon as it is sufficiently ripe, for the purpose of saving the fodder; the average yield is 50 bushels per acre, but in consequence of the extreme drouth, it was somewhat less the present season.

13. My manure is plowed under, from eight to ten inches, for all field crops.

14. My potatoes have not been affected with any disease.

GRASS LANDS, &C.

15. I have of grass, three varieties—timothy, red-top and clover; in seeding with clover, I sow six quarts with two of timothy, per acre, and prefer seeding upon wheat in the month of September, for sandy soil. I am not in the dairy business, but suppose timothy, red and white clover, to be best adapted for such purposes.

16. I usually mow twenty acres for hay; average product, two tons per acre; my grass is cut when the seed is full, but not ripe; for making hay I have but one rule: after mowing down, it remains until wilted, then put up in small cocks, where it stands until thoroughly cured.

17. My meadow land is all suitable for the plow.

18. I have no bog or peat lands.

19. My plan for destroying weeds is as follows: plow deep and plant to corn; cultivate, plow and hoe, suffering nothing to live but the corn during the season; about the first of September, sow to wheat among the corn, next the clover seed and plaster—this operation destroys weeds

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on my farm, and think it would prove successful elsewhere; dock is the most troublesome, and is to be pulled up root and branch.

DOMESTIC ANIMALS.

20. My farm stock consists of ten head of cattle; one pair of oxen, three cows, five head young cattle. Ten horse kind; one pair farm and carriage horses, two brood mares, six colts, from one to three years old. My cattle are a cross of Durham and Devon; the Durham predominates; my horses are mostly of Blood stock.

21. In order to ascertain the relative value of different breeds of animals I have made the following experiments: two heifer calves were selected, one Native, the other Durham. They received equal attention; at the age of eighteen months, the Native weighed 600 pounds, the Durham 900 pounds. I have noted the gross weight of Native cattle, such as I formerly had, which was from 2500 lbs. to 3000 lbs. I have now a pair of working oxen five years old, a cross of Durham and Devon, that weigh 3,800 lbs. In market they command at least one-third more than Native, and for heavy farm work are equal to two common pair. In relation to horses, the market value is perhaps the best mode of ascertaining the relative merits of the different breeds, as the judgment of men is so dissimilar in relation to what constitutes the best horse; at least, that is the question with those who are breeding for market. I hold that judicious breeding is quite as important in horses, as it is in any other stock, and is equally remunerative. During the last two years I have disposed of six that were raised on the farm, at prices ranging from one to two hundred and fifty dollars, none less than one hundred; the above were sold at an early age, (from three to four years old,) without the expense of feeding, (and fitting as it is called,) or driving to market. Horses of common stock, such as are usually raised in the country, at the same age and in like condition, could not have been sold for more than seventy-five dollars each. Had the two classes in contrast, been suitably prepared and trained for our best market, the difference would have been much greater in favor of the blood stock. I am also making some test trials with sheep. Last year two buck lambs were selected from my flock, of equal age and condition, and placed by themselves for comparing; one a Native or common Grade, the other French and Spanish Merino, half and half—at the age of six months, the former weighed 85 lbs., the latter 125 lbs.; for the first, I offered to take five dollars; for the second, sixteen dollars has been refused.

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22. For wintering cattle I prefer corn fodder, cut straw and meal, good stabling for shelter, water twice a day.

23. The milk and butter made from three cows is used in the family.

24. I usually keep 250 sheep, of the French and Spanish Merino breeds; average four pounds per fleece; sold the last year for fifty cents per pound. One hundred produce lambs, and have reared over that number for the three past years. No lambs are sold to the butcher. At three years old, they bring from three to five dollars.

25. Cornstalks, hay and roots, I regard the best and most economical food for wintering sheep. For shelter, sheep barns, for those who are prepared to build them. I have lost no sheep for the last three winters.

26. I have twenty-five head of swine, Grade, but of superior quality; feed on corn and corn meal. A portion are usually killed at ten months old, the remainder at twenty months; average weight of the former, 250, latter 400 pounds.

27. Have made no experiments to show the relative value of roots compared with corn or other grains.

28. My orchard consists of about seventy trees, all grafted fruit. The following are among the varieties: Rhode Island Greenings, Spitzenburg, seek-no-further, Prince's harvest, Newtown pippin, golden russet, northern spy, Baldwin, &c.

29. Of other fruit, I have only peaches worthy of notice.

30. My trees have received no injury from insects.

31. Plowing in manure, planting and hoeing among the trees, with careful pruning occasionally, is the mode of treatment.

32. I think of nothing under this head that has not been noticed in previous answers.

FENCES, BUILDINGS, &C.

33. My buildings were erected some twenty years since by a former occupant, and are not such as I would recommend in this report.

34. My fences are made of oak and ash rails, eight rails high, the corners resting upon large flat stones.

35. The produce of my farm is measured or weighed with care, and noted down occasionally.

36. I keep accounts and can exhibit with a degree of accuracy the result of each year's operation. This practice is absolutely essential to the farmer.

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37. The following presents a general exhibit of my farm account for the past year:

CR.

By 10 acres of wheat, 25 bushels per acre, 250 bushels, $1 per bushel,	$250 00
" 250 fleeces of wool, 4 lbs. per fleece, 50 cents per lb.,	500 00
" 100 fat sheep, the increase of one year, $2 50 per head,	250 00
" profits on horses,	250 00
" " on cattle,	150 00
" " on swine,	150 00
" 200 bushels surplus corn, 50 cents per bushel,	100 00
" 60 bushels potatoes, 37½ cents per bushel,	22 50
	$1,672 50

Hay, straw, corn-fodder, and remainder of coarse grains, roots, &c., are included in the profits on stock, horses, cattle, sheep, swine, &c.

DR.

To interest on $5,000, value of farm, at 7 per cent.,	$350 00
" " $1,500, value of farm stock,	105 00
" wear of farm implements and interest on same,	25 00
" ten barrels plaster,	15 00
" seed wheat, corn, clover seed, &c.,	25 00
" one man 6 months, $14 per month,	84 00
" board of man 6 months,	30 00
	$634 00
Balance for my labor,	$1,038 50

I purchased the above farm six years since. It had been rented out to A, B, and C, for several years previous, and at the time of purchase would not rent for more than $100 per annum. The part then improved has been overhauled to the depth of ten inches, and fifty acres of improvement added.

C. W. GREENE.

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TREASURER'S REPORT.

The undersigned Committee, appointed to examine the accounts of the Treasurer of the Michigan State Agricultural Society, beg leave to report that they have performed that duty, and herewith submit the detailed account of the Treasurer, of all moneys which have come into his hands from the 1st day of December, 1852, to the 14th day of December, 1853; and also of all moneys paid out by him during the same period.

The Society commenced the year with a debt (December 1st, 1852) of $534 18.

The receipts of the Treasury from Dec. 1st, 1852, to Dec. 14th, 1853, have been as follows:

Collected on Detroit subscription		$947 63
Receipts at Fair ground		4,406 31
All other sources		1,482 49
Total receipts		$6,836 43
The total expenditure paid by the Treasurer during same period	$6,661 98	
Add debt of Society, Dec. 1, 1852, paid	534 18	
		7,196 16
Balance now against the Society		$349 73

We have examined the vouchers of the Treasurer, and find them all correct. They are herewith returned to the Executive Committee.

There is yet due on the Detroit subscription twenty-five dollars	$25 00
Also the appropriation by the State	1,000 00
	$1,025 00

This would, when received, pay off the present balance due the Treasurer, and leave in his hands upwards of six hundred and sixty dollars, to the credit of the Society.

But it is highly probable that there are some checks on the Treasurer, issued for premiums, still outstanding, though we are still unable to state what amount.

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The account of the Society has also been at times pretty largely overdrawn at the Peninsular Bank, during the year. Previous to the Fair, the account was overdrawn all the time, reaching to about $1,200 or $1,400. For this the bank presents a balance of interest account of $70.

We recommend that the claim be allowed and paid.

It will be perceived by the above that the income of the Society for the past year has been sufficient to pay off the debt with which the year was commenced, to defray all the current expenditures, and may, perhaps, leave a small balance to the credit of the Society, to begin another year with.

All of which is respectfully submitted.

GEO. V. N. LOTHROP,
S. M. BARTLETT,
CHARLES DICKEY,
Committee.

Detroit, Dec. 15th, 1853.

AN ESSAY ON THE COMMON POTATO: ITS CULTURE, DISEASE AND REMEDIES.

BY N. DAVIDSON REDPATH, OF FOGO, ALLEGAN CO., MICH.

The potato, pomme de terre, of the French, was originally a native of Chili, South America, from whence it was introduced into Europe by the Spaniards, towards the conclusion of the sixteenth century.

It was unknown in the British Islands until the year 1584, when it was brought over from Virginia by Sir Walter Raleigh, and from a few roots cultivated in his garden at Youghal, in Ireland, it is generally supposed all the potatoes in the United Kingdoms have sprung. In all probability the New England States derived their supply from Ireland also; hence the common, though unappropriate name, *Irish potatoes*, as applied in the United States to the common variety of this invaluable root.

Its progress in public favor was at first remarkably slow; its cultivation being confined chiefly to the gardens of the opulent, where it was reared rather as an article of curiosity than of utility, and nearly

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two centuries elapsed before it was generally cultivated as a field crop. In Scotland the first yield of potatoes was planted in the county of Sterling in the year 1732.

It has been ascertained by chemists that the potato contains seventy parts of water and thirty parts of farina, or pure starch, in every hundred parts. According to an analysis made by the distinguished Sir Humphrey Davy, the avoirdupois pound of seven thousand grains of the black kidney potato contained:

Of soluble mucilage,	970	grains.
pure starch,	695	"
fibre,	622	"
water,	4,713	"

There are numerous varieties of the common potato, which are distinguished by the shape of the leaves, the color of the flowers, and the general appearance of the hanlms or veins. The tuberous roots, which alone is the object of cultivation for food, differ essentially in the quantity and quality of the farina which they contain; some being of a fine mealy quality, while others are of a waxy, disagreeable flavor. Potatoes however, of the very best quality, may become deteriorated by continuous planting on old, exhausted, or clay soils, deficient in *humus* or vegetable mould, while tubers deficient in farina may be greatly improved in quality by being planted in virgin soil in which *humus* abounds.

The potato, in common with all tuberous and bulbous plants, has two ways of reproduction; the one by the multiplication of its roots, and the other from the seeds. The first mode is that most generally practiced; the latter method is that by which new and important varieties may be originated. As this process, however, is tedious, and the result, as regards quality, is very uncertain, farmers, instead of fretting away valuable time in this renovating process, would consult, perhaps, their interest in leaving this department of labor altogether in the hands of the horticulturist or the market gardener. A superior potato, however, has frequently been produced by crossing. This is done by simply selecting two good varieties and taking the pollen from flowers of one variety and dusting it upon the pistils of the others, by which means the good qualities of both kinds are frequently united in the tubers produced. Potatoes may also be propagated by planting slips from the vines; shading them for a short time from the rays of

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the sun until they strike root. Propagated by this method, even from diseased plants, they have been greatly improved. They are also true to their kinds.

To insure a vigorous, sound, and full crop of potatoes, it is necessary that the seed should be frequently changed, at least once in every three years. Farmers might retain favorite varieties, if suitable to the climate and soil, only procuring them from a different, and, if possible, from a poorer soil than that of their own farms. By this too-much-neglected method, the potato is both invigorated and renovated. Every intelligent farmer knows that by growing the same crops too long on the same soil both the one and the other are deteriorated. On the other hand, the benefits resulting from a change of seed, whether tuberous or cereal, have been proved from experiments made by the most eminent agriculturists in every quarter of the globe, notwithstanding that some may have said and written to the contrary. "The reason why this interchange of crops," says the celebrated Liebig, "is so advantageous—the principles which regulate this part of agriculture, are therefore, the artificial production of humus, and the cultivation of different kinds of plants upon the same field, in such an order of succession, that each shall extract only certain components of the soil, while it leaves behind or restores those which a second or third species of plants may require for its growth and perfect development."

Although numerous failures have recently taken place in various sections of the country, by what is popularly called the "blight" or "disease," yet, all in all, there is no crop so remunerative through a series of years, as the potato. It forms an excellent article of food not only for man, but for horses, oxen, milch cows, calves and swine.

Opinions differ regarding the effects of potato-culture on the soil: some maintaining that the ground is thereby improved, while others assert "that from the large quantity of nutritive matter which the potato extracts from the soil, it cannot, reasoning from analogy, be viewed in any other light, than a serious drain upon the vegetative powers of the land; and numberless experiments have been shown, that when planted a second time, without manure, the crop has sensibly diminished."*

*British Husbandry, by Society for Diffusion of Useful Knowledge.

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The same remarks, however, are equally applicable to all other kinds of roots, for according to Liebig, "Fallow-turnips, cabbage, beets, &c., are considered to belong to a class which impoverish the soil."

There are numerous methods of cultivating the potato. Ireland, though it cannot be called the *father-land*, yet is well entitled to the appellation of *foster-land* to this invaluable root. In that interesting country potato-culture is, in many places, performed with the spade, upon beds a few feet broad, upon which potatoes are laid promiscuously, after manure has been spread on the surface. The potatoes are then covered with earth, dug from the trenches. When the plants have appeared a little above ground, they are again covered with earth derived from the same source. This process of earthing up is continued until the plants blossom, when it is discontinued. This is called the "lazy-bed-system." It is still practised in several parts of Ireland, in some counties in England, and the Western Islands of Scotland. This plan is universally condemned by the best cultivators, and can only be applicable on the small farms of Ireland, or other places, where the land is tilled by spade husbandry, and where manual labor is at discount in the market. Another popular way of planting potatoes in Ireland, is by the method called "*kibbing*." The operator with his right hand and left foot thrusts his spade a few inches into the ground in a sloping direction, then raises it a little up, and with the left hand throws into the vacancy behind the spade, a potato set, which he takes from a small bag suspended from his neck. The spade is instantly withdrawn, the tuber is buried, and in this way the potatoes are planted broadcast or in rows with amazing celerity. The general plan in Ireland now, is to plow the land in ridges which are levelled with the spade, the potatoes are laid on the surface and then covered with earth from the furrows. They are earthed up once or twice during the season.

The original practice in Scotland was by dibbling in rows about thirty inches apart. The manure was plowed in broadcast, and the potatoes dibbled in every third furrow. This method, though somewhat tedious, was excellently adapted for preventing the drouth from affecting the manure and the tender roots of the plants, which is invariably the case in drills ridged up in an exposed position. Sometimes the method is practiced by women and children following the plow and dropping the seed into every third furrow. When this is the case, the plowing must be

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very shallow, as four or five inches is generally considered sufficiently deep for depositing the tubers. Excessive earthing up should be avoided. When potatoes are planted in drills the cuttings or sets are placed from six to ten inches apart.

Mr. Falkner, the author of "British Husbandry" says, "when potatoes are cultivated upon a large scale, the operation is very similar to that described in sowing turnips, in which the trenches may be made either at one operation of a double-breasted plow, or by a single plow, by what is called "a bout," or going and returning; the dung is then carted and spread in the trenches, and the potato-sets afterwards thrust through it, so as to rest upon the ground, by which means it is less likely to be disturbed in the operation of covering, which should be done by the hand-hoe. We must, however, admit that there is much difference of opinion as to the best mode of putting in the manure for potato crops; for although long stable dung, in a fresh state, is very generally used, and most generally in drills, some put it *under* and other *over* the sets."

In our own country, the method of planting the potato in *hills* about three, or threea-nd-a-half feet apart is almost universal. It is eminently American, and perhaps better adapted to the climate than any other system that could be introduced. During our warm summers the roots of the plants are better protected from drought than they could possibly be by the so called improved drill system. "Hilling" is well "calculated for the meridian" of a new country; besides the produce will be as abundant, or nearly so, by this system as by any other. Every system will have its advocates, but by whichever way the potato is planted, it is of the first importance that the land should be thoroughly prepared, especially if old, and freed as much as possible from noxious weeds and roots.

In preparing the soil, a first plowing, as deep as possible, should be made in Autumn, in order that the land, especially if stiff, may have the advantage of the Winter's frost. By this plan, not only are tenacious soils pulverized, but destructive grubs destroyed, and the roots of troublesome weeds eradicated. *Winter-fallowing*, if the expression may be allowed, is better than bare Summer-fallowing. A thorough pulverization of the soil is indispensible to the successful rearing of the potato; therefore, a second plowing and harrowing in the Spring previous to the time of planting, (which should immediately follow,) will

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be requisite on any soil, but especially on lands stiff or tenacious. Good, deep, thorough plowing is not more essential in husbandry than good, close, thorough harrowing. Many endeavor to have the former well done, while the latter is comparatively left undone.

Since the appearance of the potato-disease, many farmers have plowed in the manure, at the Autumn or first plowing, while others put it into the drills along with the potato, either *under* or *above*, as formerly described. In humid countries like Great Britain, it may be unimportant which plan is adopted; but in countries subject to long periodical drought, there can be no question that fall manuring is pre-eminently the better way. The manure is thereby decomposed and assimilates itself to the soil.

The period of planting in our Northern latitude may be fixed with safety about the beginning of May down to the first of June. In Great Britain the common varieties are generally planted the last week of April, or the first week of May; the earlier kinds, from the middle of March to the end of April. A very general opinion prevails in this country, that late planted potatoes give a greater yield than those that are planted early. This may hold true in some seasons, but on an average of years, the early planted roots will not only be more productive, but what is of great importance, more sound and nutritive as regards quality. It is now well known that early planted potatoes frequently escape the "disease," while the late planted are often destroyed. So well is this understood in the United Kingdoms, that British farmers not only plant early in the season, (from March to May,) but plant the early varieties. The kind used in these Islands, is what is called the Second American Early. The common varieties, formerly so productive, are now so very precarious that they are seldom planted. The early kinds are ripened and ready for "lifting" before the blight makes its appearance.

The greater the quantity of farinaceous matter that a potato contains the more subject it is to disease. Hence, the favorite Meshannock, from its fine quality, is amongst the first to suffer; while the Yam, Rohans and Merinoes escape with impunity. It may be generally known that potatoes with *red* flowers are more predisposed to disease than those bearing *white* ones. The disease, too, does not effect the farina, but the fibrous part of the tuber. The farinaceous matter, therefore, of diseased

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potatoes, if not too far gone, may be extracted and used for food with all safety; as according to Professor Johnston, of Durham, England, it contains no deleterious matter. It may also be used for starch.*

It has been a matter of dispute amongst practical men whether potatoes intended for seed should be allowed to attain a perfect ripeness, or whether they should be lifted before they are perfectly ripe. The advocates of the latter mode assert that green or unripe potatoes, as they contain more nutritive matter, always produce better crops. Those who advocate the former opinion, maintain that as unripe potatoes never keep well, they consequently cannot produce the best and soundest crops. Truth may lie, as it often does, between extremes. Let farmers exercise prudence and judgment in the matter. Many recommend that potatoes intended for next year's seed should be planted late and lifted early, that the tubers may contain a sufficiency of juice to nourish the young plant before it is capable of collecting much sap from the soil.

Since the potato has shown symptoms of degeneracy, doubts have been raised as to the propriety of planting the crop according to the uniform practice, by *sets* or cuttings having one or more eyes of the potato in each. No objections can be raised, it is conceived, to the planting of the entire tuber, except on the ground of economy; and it is a fact that an unwise policy has carried some, nay, almost every one, instead of selecting the *best*, to lay aside the worst, the refuse of their crops for seed! Nature propagates by the entire tuber. Agriculturists should study nature.

"Nature is the friend of truth!"

The potato being generally considered a hardy plant, little care was exercised either as regarded its cultivation or preservation. At seed time the large and healthy tubers were selected for the table, and the small and refuse for seed! Anything, at one time, short of a stone, it was conceived, would produce good potatoes. Even small potatoes were divided into several parts, mere atoms, destitute of nutritive matter, insufficient to nourish the tender root until it attained the requisite stamina to attract its support from the soil. Hence the wisdom of cutting the sets large, when the tubers are divided. Some philosophers have said that there is no opinion so absurd but that it will have its advo-

*Farina or potato-flour is extensively used in France by bakers and confectioners for the purpose of giving lightness to their bread and pastry, &c. It forms a light and wholesome food for infants, children and invalids. The method of obtaining the flour will be given in the appendix, No. 1.

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cates; and "small potato advocates" are not wanting, who aver that as good a crop, good in quality and abundant in quantity, may be realized from small seed as from large sets, or whole moderate sized potatoes. Now, it has been ascertained that the produce from the entire tuber is generally superior, and that there is a corresponding ratio between the weight of the sets, whether cut or whole, and the weight of the produce. In the report of the Dublin Agricultural Society, it is stated "it was found on comparison, that of sets cut from large and small tubers, that the produce in favor of the large was eighty-four to sixty-four." It is now universally allowed by all conversant on this subject, that large sets make a more productive return than small ones, and large whole potatoes than small entire ones. When potatoes are cut for seed, great care should be exercised in selecting good and sound tubers. All frosted, partially rotted, mouldy, heated, and those injured in lifting, should be laid aside as useless. In all these cases the juices are either absorbed or vitiated, and consequently a stunted growth, if they grow at all, is induced, not only to the diminution of the increase, but too often to the entire failure of the crop. The most scrupulous care should therefore be exercised from first to last in preserving the juice of the tubers appropriated for seed. Inattention to this matter is a master evil, and one that has a greater tendency to induce and perpetuate the "taint" or disease than any other. Potato plants raised from heated tubers are affected with what is called the "white rot."

The first eye next the root, should be thrown aside as useless. The watery end of the potato produces earlier and better crops than cuts or sets taken from the root end. The reason of this is, that there is more moisture in the one end than in the other, consequently a greater energy is imparted to the growth, and hence an earlier crop.

It was the opinion of the late Sir John Sinclair, and also of several eminent agriculturists, that plucking the flowers from the potato ensures a greater weight of crop. This fact, if not generally known to farmers, is well understood by gardeners, who believe that the flowers draw more sap from the root of a plant than any other part. Numerous experiments have been made in Scotland, some of them under the auspices of the "Highland Agricultural Society," on this interesting subject, from which it appears that in seasons when their flowers are plentiful, an increase of one-sixth on the crop may be effected by plucking them off;

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but in years when the flowers are deficient, the difference is slight indeed. On this topic, it may not be uninteresting to adduce the opinion of the celebrated Liebig, who remarks that "much attention has recently been drawn to the fact that the produce of potatoes may be much increased by plucking off the blossoms from the plants producing them, a result quite consistent with theory. This important observation has been completely confirmed by M. Zeller, the director of the Agricultural Society of Darmstadt. In the year 1839, two fields of the same size, lying side by side, and manured in the same manner, were planted with potatoes. When the plants had flowered, the blossoms were removed from those in one field, while those in the other field were untouched. The former produced 47 bolls, the latter only 37 bolls."* *Agricultural Chemistry.*

The diseases of the potato, hitherto, have been the *curl* and the *blight*. Much has been said and written about both these diseases, yet the causes of them have never been satisfactorily explained. With regard to the first of these diseases, some have asserted that it is caused by the seed-tubers being frosted, while others imagine that it arises from the potato-set being incapable of supplying the young shoot with a sufficient quantity of nourishment until it is able to provide for itself. It is well known that the juices of vegetables subserve all the purposes of blood in animals; hence, both animals and vegetables are strong or weak, sickly or healthy in proportion to the quantity and quality of the circulating fluid which they respectively contain. Frost destroys the juices of vegetables, and consequently utterly unfits them for performing the functions of vegetation. As formerly stated, all frosted potatoes should be rejected for seed. A yearly change of seed is recommended for this disease.

The *blight*, is more virulent in its attacks, and more capricious in its workings than the disease formerly mentioned. Its ravages have been more severe in some localities than in others; while one part of a field remained unscathed, the other part was entirely tainted. This year, potatoes planted on heights are destroyed, while the humble occupants of the valley remain uninjured; next year, those growing on elevations are entirely exempt, while those occupying low ground are utterly blighted. This apparent *vice versaing* of the disease in its operations having puz-

*The boll contains six bushels.

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zled the minds of the most observant, led many to view it as the "finger of God"—a direct interposition of Heaven. Hence, such designations as "inscrutable distemper," or "mysterious disease." Without animadverting on such sentiments, or attempting to controvert them, it will be more profitable to devote the remaining pages of this essay to some of the pre-disposing causes of the potato disease, with suggestions for its eradication.

There are many ways by which potatoes are pre-disposed to the disease. As formerly stated, inattention to the proper preservation of the vegetable juices may be regarded as the primary cause of taint. In wet seasons, the tubers are frequently rotted in the ground; at other times, they are partially frosted before the time of lifting; in both these cases the tubers are utterly unfit for next year's seed. Potatoes may be soundly raised, yet by improper management in pits, or in close cellars, become heated, whereby the juices are abstracted, and the *white* or *dry rot* is induced. Such kinds are worthless for seed; the dry rot is also infectious.

> "A few sickly roots infect the lot,
> And poison all the rest!"

Half a bushel of diseased tubers, it has been said, will destroy a whole pit. Some potatoes, after being cut, are frequently thrown into a heap, or put into bags, until the time of planting, and thereby heated so much especially in the middle of the heap, as to be seriously injured. The cuts in the middle of the bag share a like fate. When potatoes are cut for seed they should be allowed to dry in a cool, airy place, (but never exposed to the rays of the sun) until the juice which exuded after cutting is formed into a thin crust over the surface.

Potato sets should never be allowed to remain long under the influence of a powerful sun, but should be covered as quickly as possible. Solar-roasting, in connection with hot earth, and continued warm weather, naturally predispose to potato-taint. Such are some of the evils which mismanagement has hitherto inflicted on this valuable root. Had wheat, barley, oats, or even corn, been used as the potato has been treated, we would have wheat disease, barley disease, and corn disease. Most, if not all, of the potato diseases are to be attributed to mismanagement. The potato disease, as it is commonly called, is no "new thing on the earth;" it has been long known. The roots have been

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gradually deteriorating, perhaps in proportion to extinction of humus in the soil. The disease is generally unknown in new countries, when planted in virgin soil, especially if common care is exercised in changing seed, and preventing heating &c., of the seed tubers, whether in pit or cellar.

Liebig has written a short, but very scientific treatise, on the origin of the potato disease, from the deductions of which Dr. Klotzsch, of Berlin, proposes for the preventing of the disease, "at a time when the plants reach the height of 6 to 9 inches above the soil, we pinch off the extreme points of the branches, or twigs, to the extent of half an inch downwards, and repeat this on every branch, or twig, in the 10th and 11th week; no matter at what time of the day." In our own land, gypsum and salt mixed together, and scattered on the hills, have been recommended as a prevention of the disease.

Both the above plans may be in many cases efficacious. By cutting, or plucking off the points of branches or twigs of annual plants, a new growth is induced; and by continuing the process, the plants may grow for any length of time. This is well known to horticulturists, who pinch off the blossom from annual flowers. The use of gypsum or plaster, is to induce moisture; the attractive power of that mineral being well known. Salt may be useful for the same end, but acting in a different way.

There can be no question but that the potato disease is chiefly produced from drought; and anything that would counteract the aridity of the atmosphere, and equalize the temperature of the soil, would have the effect, if not of entirely eradicating, at least of modifying the disease. Nothing, it is conceived, would have a greater tendency to effect so desirable a consummation, as a liberal *mulching* of the potato field, immediately after planting. As the process of mulching, so very beneficial to orchards, may not be generally known, an accurate account of the best mode is hereby subjoined, from the pen of the well known Mr. J. J. Thomas, of Macedon, New York:

"Mulching, that is covering the soil with old straw, coarse litter, or leaves, not less than five or six inches thick: this keeps the top soil throughout the hottest day, as moist as the dew of morning, and consequently the under soil can never become dry. The moisture of the soil is thus preserved in the most even manner—incomparably better

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than by the irregular supplies of artificial watering, which not unfrequently do more harm than good, by causing the surface to bake, the water not penetrating to the roots below."* The moisure of the soil being, acording to Mr. Thomas, thus preserved in the most even manner, the potato would not suffer from any of those sudden changes which so frequently take place in summer. It is no uncommon thing for the potato, after attaining a certain size to have to struggle for a precarious existence for weeks and weeks. The "heavens above being as brass and the earth as iron." Nature in this case husbands all her resources, no more branches or twigs are thrust out, the sap-vessels become contracted, the stems shrink, and vegetation all but ceases. The long looked for rain approaches—it descends in torrents—the earth is saturated, and vegetation "drinketh up water like the thirsty ox." They imbibe to repletion. Such is the case with the potato. The sap-vessels are now dilated—the soil, thoroughly saturated, sends forth noxious gases; if the weather continues cloudy and no wind is stirring, evaporation is suppressed and the potato dies. Or it may be that then is the "bright shining after the rain." In this case according to Liebig, "When the plant has taken up a maximum of moisture and the evaporation is suppressed by a low temperature or by continued hot weather, the supply of food, the nutrition of the plant ceases; the juices stagnate and are altered; they now pass into a state in which they become a fertile soil for microscopic plants. When rain falls after hot weather, and is followed by great heat without wind, so that every part of the plant is surrounded by an atmosphere saturated with moisture, the cooling due to further evaporation ceases, and the plants are destroyed by fire-blasts or scorching (*sonnenbrand*, German,) literally, sun-burn or sun-blight."

As formerly hinted, the disease may be induced by repletion, after a superabundant fall of rain. A bright gleam of sunshine expanding the stagnated sap, as formerly explained, may cause a rupture in the sap-vessels—a kind of vegetable apoplexy ensues, and the plant suddenly dies.† Besides, it is well known to Agricultural Chemists and farmers acquainted with scientific agriculture, that an excess of carbonic acid

*Extracted from an excellent article by Mr. Thomas, Patent Office Report (Agricultural,) for 1850—51.

†Minute Animalculae in such cases take possession of the plants, which have led some to the conclusion that they are the cause of the disease. This is mistaking the cause for the effect. It would be as conclusive reasoning to say, on beholding the carcass of an animal crawling with maggots, that said maggots were the cause of the animal's death!

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kills plants, and there can be no question that this is another prolific cause of the potato disease.

In addition to these, the potato crop may be wholly cut off, prematurely, by excessive drought; the tubers, in such cases, although untainted, yet not being perfectly ripe, will be of a green and waxy taste.* The potato may also be effectually destroyed by excessive rains; the tubers become rotted in the ground, and are seldom worth the raising. This disease is called the black-rot.

Thus we see that the potato crop may be destroyed partially or entirely, by excessive droughts or excessive rains; by repletion—causing rupture of the sap-vessels, and vegetable apoplexy; by an excess of carbonic acid or other gases, whereby the plants are poisoned; by sun-burn or sun-blight, by which the vines are scorched; and finally, by suppressed evaporation.

A thorough mulching of the ground immediately after planting, the potatoes being hilled up at the same time, so that no future hoeing will be required, it is believed, would have the effect of greatly ameliorating the disease, if not of entirely eradicating it. But in connection with this mulching operation, it is essential that attention be paid to the seed tubers—that they be changed, if predisposed to disease, once a year; that the vegetable juices be preserved uninjured; that attention be paid to the disposal of the seed, whether stowed away in pits or cellars.†

In conclusion, to those who view the potato disease in a serious point of view, as the disapprobation of Heaven, we would say, are you of the number of those who regularly present to Nature the refuse of the earth's beneficence in expectation of abundant produce? Are you surprised, that just as you sow so shall ye reap? If so, read your sin in your punishment! Your conduct is as preposterous as the conduct of the Israelites was impious, who instead of presenting before the Lord the unblemished of the flock, offered the torn, the lame and the blind.

To the scientific farmer we would say, in regard to this disease, listen to the voice of reason and experience, as addressed to you from various sections of the country, through the public documents of the land.

*See appendix, Note 2, for a superior method of boiling unripe potatoes.

†For an approved method of pitting potatoes, see Appendix, Note 3.

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Avoid all empiricism. Attend to the suggestions of science; then that which is now crooked will soon be made straight, and that which is wanting will speedily be numbered.

ALLEGAN COUNTY, MICH., 2d Dec., 1853.

APPENDIX.

NOTE 1.—*Method of Extracting Farina or Potato-Flour from the Common Potato.*

The process of extracting the farina from potatoes is very simple. The most mealy, or those which contain the greatest quantity of farinaceous matter, should be chosen. When performed on a small scale, which may be done in every house, the potato should be skinned as thin as possible, and then grated down with a coarse grater. The pulp should then be washed through a hair-scive, and washed repeatedly until the flour is perfectly white.

When done on a large scale the tubers are not peeled, only the pulp will require to be more frequently washed. A machine, consisting of an inclined cylindrical grater, revolving in a hopper, is sometimes used for grinding the potatoes. Water must be thrown on the potatoes while grinding, in order to facilitate the passage of the pulp through the machine. After washing, the flour must be dried carefully, in the open air, if possible, or in the house at a moderate heat.

NOTE 2.—*Method of Cooking unripe Potatoes.*

When the vines decay before the tubers are ripe, a deficiency of farina or starch causes a waxy and disagreeable taste. To obviate this, peel the potatoes and put them in cold water and boil them gently till nearly done. The water should then be drained from them, the potatoes put on the fire, and then mashed with a large two-tined fork instead of a spoon. The fork breaks them into rough pieces, allows the water to escape, and certainly tends very much to improve a watery potato.

NOTE 3.—*Method of storing Potatoes in Pits as practiced in some parts of Scotland.*

The potato is an underground production, and to attempt to keep it in a sound and healthy state, otherwise than in its natural element, is as unnatural as to propose keeping an amphibious animal in a healthy

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state away from water. To imitate nature as nearly as possible, the width of the pit should be three or four feet, along the bottom of which a layer of potatoes, not exceeding three or four inches thick, is to be placed; over this throw a thin stratum of well-broke mould, then potatoes and mould alternately, until the pit is finished, with a gentle rounding at the top, not ridged as usual. Take care to have loose earth next the potatoes, and no straw; allowing the earth to mix as much as possible with them and the potatoes to be dry when stored.—*Aitken on Potato Disease.*

A SYNOPSIS OF AN ESSAY,

OR AN ARTICLE SHOWING THE RESULTS OF SEVEN YEARS' CULTIVATION AND EXPERIMENTS MADE ON THE CAUSE AND CURE OF THE POTATO ROT.

In 1846, I was first visited by the Rot among my Potatoes. They were principally of two varieties, the Meshannock, and a variety of the Pink-eye. I lost at least three-fourths of the former, by the rot, but none of the latter. I sorted a part of the Meshannocks after they were dug; those not sorted soon rotted, as did also those of my neighbors. When plowing in the spring, I plowed out some sound potatoes and planted them; they were decidedly the best and most productive that I raised that season.

SECOND YEAR'S TRIAL.

This year I planted a piece of new land, with a variety I raised the previous year, viz., the Pink-eye; the land being a light sandy loam, and well plowed and harrowed. I planted it the 15th of May, hoed twice by the fourth of July. About the middle of August, I observed that the tops were beginning to die, and soon emitted a very offensive smell, and were quite dead within two weeks after the first appearance of blight. The latter part of Oct. I dug a part of this crop, and found the first settings were all rotten or decaying. Their stench sickened me, therefore I did not dig them all. Third year, 1848, I plowed one acre of wheat stubble which had not been plowed before, except a place where wood had been charred, one and a-half years before. In fitting the ground, I spread the coal dust, thinking its influence would prove beneficial. I planted one acre also in my garden, this year, after which I

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plowed where I raised potatoes the year before. I found those left in the fall wintered finely. I never saw potatoes looking brighter; therefore I dug and planted them on the same ground. This year, as soon as I discovered any disease, or dead leaves, on the tops, I took up a hill nearly every day, for the purpose of dissection, to ascertain where the disease commenced. I soon satisfied myself that it alwas commenced first in the old tuber. About the middle of August my potato tops were killed by the blight, in the two pieces first mentioned. When dug in Sept., they were badly diseased, especially where I spread the coal dust. The third crop showed no signs of disease on the tops while growing or on the tubers when dug. The yield was more than commonly good. (I left some to winter in the ground, where they grew, and shall hereafter call this my seed patch.) I was now led to think of the cause of so strange a phenomenon and came to the conclusion that the disease was in the seed root.

CULTURE FOR 1849.

I planted one acre with potatoes, (obtained from a neighbor,) cultivated them in the usual way; I commenced early to dissect the stalks and old tubers, and found as on the previous year, the disease showed itself first in the old tuber.

Another crop: those left in my seed patch, were cultivated on the same ground and left to winter there again.

CULTURE FOR 1850.

On the 16th of May, I dug one-half bushel of the last mentioned potatoes, and planted them on a rich black loam, in one corner of my cornfield. I planted about one acre this year, besides, with potatoes obtained from a neighbor; while the former grew finely during the whole season, producing a healthy crop, the latter were diseased early. I came to the conclusion, as to the cause of the disease, as on previous years.

CULTURE FOR 1851.

About the 1st of May, I dug a quantity of seed potatoes from my seed patch, and purchased the same quantity of a neighbor, of the same variety, and planted them side by side. In July we had some pleasant showers, which saturated the ground, putting it in condition to ferment and decompose vegetable matter. I carried on my investigations from day to day, and found all the seed roots I had purchased were

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fermenting, and the disease quickly spread through the hill. When it came in contact with the new tubers, I washed some, and by holding them between me and the sun, could see from day to day how far fermentation had gone in the roots. I now became convinced that this evil is the result of a transgression of a natural law, viz: The earth is the only natural place to keep the seed root. While this evil happened to the potatoes obtained of my neighbor, those taken from the seed patch grew finely, and gave a bountiful yield of sound potatoes. I now determined to try fall planting. I furrowed out one acre, and dropped a potatoe every eight inches in the furrow as near as I could; covered them with two furrows in the form of a ridge.

CULTURE FOR 1852.

March the first, I found that nearly all the potatoes I planted in the fall, were frozen as hard as frost could freeze them, therefore in April, I was obliged to hunt for those that were not frozen, and plant them over again. This spring I purchased potatoes of six different individuals skilled in raising potatoes, and of nearly all varieties in common use in this part. I commenced planting the last of April—planting some nearly every day until the first of June. I planted four acres this year in patches, in different localities, on different soils, and in different ways. In order to ascertain the best method, I planted some of my potatoes, taken from my seed patch, in every patch but one, as a test, and shall hereafter call them "Terra Cultured potatoes;" those kept in cellars No. 2, and those buried No. 1. My potatoes were cultivated twice by the 4th of July. The season being dry and cool, the disease has been far less malignant, than in former years. Frequent examinations during the season, showed that No. 2 was more diseased than No. 1; that the early planted were less diseased than the late planting; that deep planting is preferable to shallow. This proves to me that the disease is not in the air.

The yield of No. 1 and 2, this year, is not half the yield of my Terra Cultured potatoes. The tops of the latter kept green until they were killed by frequent frosts, while No. 1 and 2 were killed more easily. When dug, their seed roots were seldom found sound, while those of the Terra Cultured had the seed root almost in every case sound, and in appearance, as in spring, having lost only in color and weight.

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REMARKS ON THE CULTURE OF PREVIOUS YEARS, ALSO ON THE CAUSE AND CURE OF THE DISEASE OF THE ROT.

Does not the last mentioned instance prove, that in order to have the potatoes healthy, the seed must be healthy also. I have noticed for several years, that common potatoes did not blossom, or if they did, they seldom bore seed balls, and that my terra-cultured potatoes bore plentifully. On them the old tubers do not ferment, and this accounts for the reason why the old tuber has been of necessity taken from the stalk (of late years) by those who wished to get balls, viz: to prevent fermentation, which makes the tops cast the bud or blossom. I planted a quantity of seed balls last fall, and have succeeded admirably with them. They are left to winter in the ground, where they grew. I have lately, December 5th, examined to see if potatoes kept in the ground where they grew, are keeping better than those which have been removed. I give the preference to the former.

The cause is not justly attributed to the climate. The potato flourishes in a greater variety of climate than any other plant made use of as food for man; therefore, after the length of time the root has been cultivated, it would be strange if, in every country where the potato has been cultivated, the cause of the disease was to be found in the climate. If cultivation alone has caused the evil, I argue that other, plants, and also our cereal grains, will fail from the same cause. If, (as is strongly argued) the cause may be traced solely to our neglect to renew the root by producing from the ball, then it follows that the age of the variety is the cause of the evil. I would ask, does any gentleman think that varieties are less aged in countries where the potato is indigenous than in our own; if not, then we may reasonably conclude that the potato is as much diseased in its native forests as in our own country; a thing I have not heard contended, but on the contrary, we are often recommended to resort thither to get the potato, that we may thereby once more have healthy roots. I believe the cause of the disease to be a transgression of a natural law. If God ordained that the earth is the place for roots, then has man made a great mistake and transgressed his law, by taking the root from the ground during nearly one-half of the year. If bruises on other roots often produce sad effects, then in the present case, man has been imprudent, to say the least. It is well known to every observer, that potatoes deteriorate in quality by keeping

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them out of the ground, and in degree to the length of time, and careless manner in which they are kept. This mode of treatment causes the root to loose some of its component and vital parts, so that in the course of time it has become enfeebled and lost its native vigor. It has also become weakened by absorption, and farther, the tops receive the juices of the root, and with it some of this adulturated juice; the new tubers also partake of the same.

FUTURE CULTURE.

To get seed roots, select one-fourth acre arable land, (on which water will not stand,) on an eastern slope—new land is the best for this use—fit early in the Spring; furrow four or five inches deep, and two feet apart; select seed roots that are about the size of a hen's egg, that have touched the ground during the previous winter. Do not cut them, drop one every six or eight inches apart, in the furrows; cover them, by filling the furrows, and then put a top-dressing of two inches of straw, or forest leaves, on each row. When the tops are two inches high, pass between the rows with a shovel plow, follow with a hoe, destroying the weeds and leveling the ground; do not hill; you have nothing more to do until fall, when the ground begins to freeze; then cover with half rotten straw, chaff or forest leaves, three or four inches deep. Your potatoes will now have a chance to ripen and rest during the winter. I shall not direct you in planting for culinary use next season. The spring following, before your potatoes sprout, you will plant another seed patch, as above directed; you will now take the residue, and plant a field crop for culinary use. Plant in drills, four or five inches deep, and three feet apart; drop a potato every eight or ten inches, cover by filling the furrows; cultivate or hoe twice. In this way you will get the greatest yield, and best quality. Continue a similar practice from year to year, and from my own experience, I believe you will find your potatoes yearly increasing in yield and quality.

The third year, you may increase your field crop, by plowing in fine manure. You have now had nature's course, pointed out to you; her laws are truths; and I humbly believe, I have given them a just exposition. All who follow my directions, will the second year, see many seed balls, on the vines in their seed patch. These may be planted in the fall as I have done, and cultivated carefully, and good will undoubtedly result from it, if pursued in nature's own way. The potato will

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grow wild in our forests if planted in them, and thus save those the trouble, who wish to get the wild root, of resorting to their native forests in South America. Finally, we may apply nature's laws, profitable to most other products; seed of every variety, should be fully matured, i. e. not harvested, until fully ripe. That which approaches the nearest to perfection should be selected for seed, and all roots for seed purposes, should remain in the ground, where they grew, until they bear seed; this course will make the seed mature earlier, and make it the most perfect of its kind.

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MARE AND HER COLTS.

The annexed cuts represent an Eclipse Mare and her three Colts, belonging to James Crawford, of Romeo, Michigan.

The mare "Nancy" was sired by Young Bedford Eclipse; he, by Old Bedford Eclipse; dam—Kate.

"Nancy," was awarded the first premium by the Michigan State Agricultural Society, at Detroit, in 1853, as the best brood mare in the class of horses for all work. She is now 7 years old.

"Lily" was sired by Young Richard: he, by Wellington: he, by John Richards; dam, Nancy. Lily is now two years old.

The horse that accompanies the mare is one year old; the colt is 8 months old.

The above is a correct statement.

JAMES CRAWFORD.

Romeo, January 4th, 1854.

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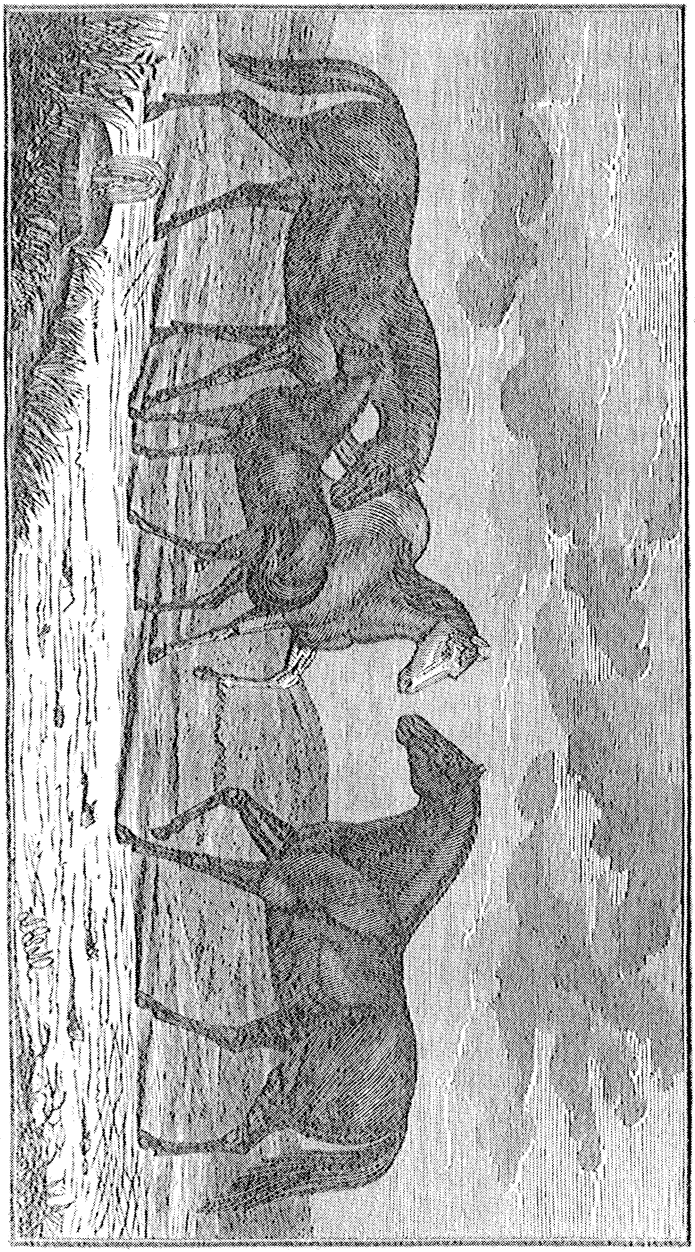

[MARE "NANCY," AND HER THREE COLTS.]

OWNED BY JAMES CRAWFORD, OF ROMEO, MICHIGAN.

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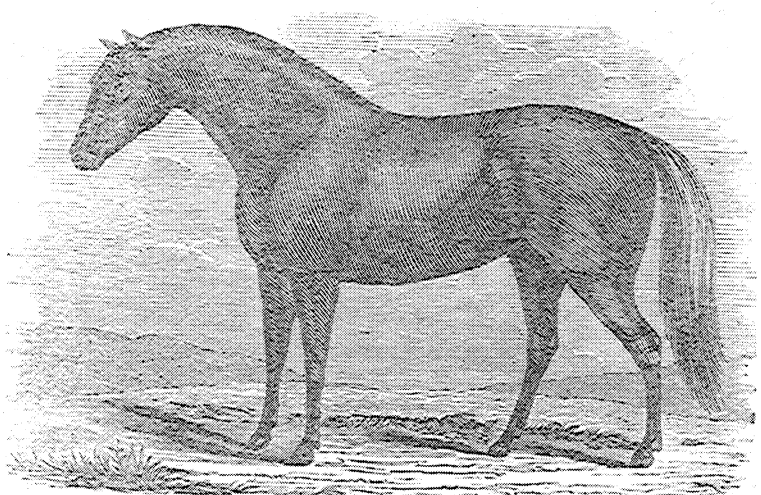

[MARE "LILY," TWO YEARS OLD.]

OWNED BY JAMES CRAWFORD, OF ROMEO, MICHIGAN.

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ADDRESS

DELIVERED BEFORE THE MICHIGAN STATE AGRICULTURAL SOCIETY, AT ITS FIFTH ANNUAL FAIR, HELD AT DETROIT, SEPT., 1853, BY REV. H. P. TAPPAN, PRESIDENT OF THE UNIVERSITY OF MICHIGAN.

The author of one of the Bridgewater Treatises, has made the human hand simply, the subject of discussion. A small part of the human frame is the hand; and yet, what would man be without it, and what has he done with it! The human hand—how perfect and beautiful in its formation, and how perfectly adapted to all its uses! There is nothing superfluous about it, and while no part of it can be spared, there is nothing that can be added to it. It is, just as it is, a complete member. But what are its uses, and what has man done with it? The history of the human hand is the history of industry—of industry under the widest points of view. Man began to work with his hands alone; and whatever other instruments he may have contrived, he has never been able to dispense with his hands. The hand then represents all industry —we will call it, if you please, the symbol of industry.

The world was given to man, at first, a wild, rude world—just as the forests and prairies of this State were given to many of you who hear me: and man, at first, had to take hold of the world with his bare hands. There was no axe to fell the trees; there was no spade or hoe or plough; and no steer trained to the furrow.

The world was filled with materials—all the woods—all the soils—all the streams—all the mines—the rain and the sunshine; all were here from the beginning, and all were given to man. But what is he to do with

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them, and how shall he begin? It might take a very long time to find out all that is to be done with them, but he must have found out, at once, that he was to begin with his hands. And then with his hands he shaped the stones into rude tools, and felled the trees, and shaped wood into other rude tools and implements. At length he delved into the mines, and found out methods of purifying the metals, and shaping them into more perfect tools and implements. His hands made tools, and with tools in his hands he made other tools, and tools by degrees grew into machinery. At first he employed simply his own strength, and then he mastered the animals, and by his hand commanded and directed their greater strength. By and by, the forces of Nature were revealed to him, and the streams and the winds became obedient to his uses. How wonderful the growth of the arts of industry, from the period when man had his hands alone, to the period when as now he wields the forces of Nature by complicated and perfected machinery—using his hands no less than before, but grasping in them a thousand instrumentalities by which the number of his hands seems multiplied a thousand fold, and he views himself a Briareus stretching out the arms of his power, like a delegated King over Nature herself, commanding the most subtle and potent elements, and making even the lightnings to run upon his errands!

And with all the power and skill which he has acquired, how has he appropriated the riches of the earth? Here on the earth were found various fruits and roots and grains, but all in a wild state scattered here and there, while the great forests seemed to usurp most of the earth's surface. Where there were open fields he seized upon them; and where the forest reigned, he by his invading industry made open fields; and he turned up the soil with spade and plough, and he planted and sowed, and cultivated until the fruits and roots and grains grew more rich and luscious and produced more abundantly, and the earth was covered with fruit trees and vines and esculent plants and waving harvest fields.

How vast a portion of human history is buried in oblivion! The historian has recorded the deeds of war, but who has written the struggles of patient persevering industry? Who has told us the story of husbandry from its feeble beginnings until triumphant harvest hymns were sung by myriads rejoicing over the abundance which labor had produced? And yet there must have been these small beginnings—and this gradual progress carried forward by experiments often disap-

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pointed, by hardships and toil, never to be remitted until the end was gained.

The mechanic arts and husbandry have gone on together, hand in hand, and together they have subdued the earth and made it what we see it to-day. The inhabitants of a new State like ours can better appreciate the triumphs of industry than those who in the older States come into being and find every thing prepared and perfected. But even those who conquer the wilderness now, can but imperfectly conceive of the condition of the first men, who, as I have said, took hold of the world with their bare hands. We are all debtors to the past, and long since have *they* been buried, and *their* history lost, to whom we owe the knowledge, the resources, and the skill which make us what we are.

He who first used the plough, made a greater advance than he who first used the steam engine; and he who first made the white and luscious loaf from the "fat kidneys of wheat" added more to human civilization and comfort than he who invented the silk-loom or spinning-jenny. But see how the world has advanced by the united efforts of the mechanic arts and husbandry! Industry, God's great and glorious minister on earth, by these two has renewed the face of the earth. How wonderful, how glorious this universal and ceaseless industry which fills the earth with good things! See what the world has grown up to by work! Think of the world at first as a wild rude world—all forest and desert; without harvest fields, without human dwellings, without roads, without mechanic arts, without husbandry; with no bridges over the streams, no ships upon the waters, no commerce, all the metals sleeping in the deep dark mines, and the forces of nature unrevealed, or revealed only to terrify; and man the appointed lord of the world standing here with only his bare hands.

Look at the world to-day—the earth is covered with harvest fields, orchards and vineyards; the earth is studded with human dwellings in hamlets, villages and proud cities; the earth is coursed with roads, its streams are crossed by bridges; rivers, lakes, seas, and oceans are covered with fleets; the mines are giving up untold treasures of coal and iron and copper, and silver and gold; innumerable manufactories are toiling day and night with the power of water and wind and steam to produce every variety of fabric for comfort and elegance; and thus the earth is filled with all useful and precious things, so that he who is born

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to-day, finds every thing provided to meet his wants and to gratify his desires. And born of all this productive activity, is commerce, which shows all men working for each other and supplying each other. Every man, at his trade, his art, his peculiar work, is doing something for other men; and the merchant, as the necessary agent, carries the various products from place to place, from country to country, by land and by sea.

But while labor has always been bestowing blessings upon the world, labor has not always been held honorable. The man who oppressed or robbed the laborer, and feasted in baronial halls, he was the lord and the honorable man. The man who led armies to conflict, deluged the with blood, and spread abroad desolation and woe, he was the hero and the honorable man. But he who guided the plough, wielded the sickle, or wrought at a mechanic art, was a degraded serf or bondsman. The productive hand—the hand browned and crusted by industry was the hand of a villein—a slave: but the mailed hand—the murdering and destroying hand—that, was the hand of a gentleman and a noble. The greatest, the most benignant change which has come over the world is that which has made labor and the laborer honorable.

The times of feudal barbarism are past; the times of industrial civilization have come. This is our age of the world—the age of the triumph and the enthronement of industry! If any country may claim a precedence in honoring industry, that country is ours. The benignant change we have mentioned is found everywhere indeed; but in a country where from its first peopling by civilized man up to the present moment there has been a constant invasion of ancient forests—a constant repetition of the original struggles of man with a rude nature around him—a constant display of stupendous improvements by the hand of industry—where the echo of the hunter's rifle has ever been dying away before the echo of the settler's axe, and the sunshine which to-day sporting upon a sea of foliage as it had done for untold centuries, to-morrow warms the cultivated fields, and lights up villages and cities, and smiles upon a busy population—a country where the marvels of labor predominate over every thing else, and where the laborer knows no master and is free to work and free to possess, without any inherited incumbrances of rank and titles—a country where the great law of Christianity, announced by its chiefest apostle is fully carried out, that

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the man who does not work does not deserve to eat, and where he who works gains food and clothing and every comfort in abundance—in such a country, labor must be honored more than in all others, and the laborer must stand up with a conscious dignity of a benignant agent, whom Divine Providence has appointed to make the wilderness and the solitatary place to rejoice, and the desert to bud and blossom as the rose. Our country can tolerate no splendid drones. If they come into existence, if not violently expelled by the busy population around, they must wither into insignificance and die out, by the force of a public sentiment more potent than the law of Kings, and retributive as a law of Heaven itself.

This all commanding and honored industry is now in its full career. But whatever may be the wonders which it has already wrought, we have reason to believe that greater wonders are yet to come. It is in full career, but it is only at the beginning of its career. The forests have disappeared and are disappearing; villages and cities are everywhere springing up; all the forms of productive art are everywhere multiplying; commerce is enlarging and spreading to and fro upon the wings of the wind; new methods are discovered, and new implements and machinery invented; the capacities of the world are continually becoming better known, and labor is conducted more and more in accordance with the laws of Nature and Providence; that which stands upon the surface of the earth, and the soil of the earth, are becoming the objects of a more perfect knowledge; and the deep bosom of the earth is still revealing new treasures of wealth. To what are we tending—to what are we tending! It is reserved to the light of future centuries to reveal the full glories of industry—to show how work has realized the destinies of man upon the earth. Then these wide spread regions will open to view, improvements to which we are now giving only the first touch, and wealth and beauty shall abound of which we now can only feebly conjecture or dimly dream.

But that these great results may be realized, or, at least, that we may contribute our part in bringing them about, it is necessary that we should be penetrated by right sentiments, and should act upon right principles. And if I were to expound these, I would begin with the sentiment and principle of our mutual dependence. And first, the mutual dependence of all the forms of industry. There is no opposi-

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tion—there can be no opposition between these. Agriculture, the mechanic arts, manufactures and commerce, have all one common interest. They call each other into being. One cannot exist without the others. The mutually sustain and give prosperity to each other. They occupy different departments, indeed, but they together make up the great circle of industry. Without agriculture, civilized man cannot subsist. But without the mechanic arts, agriculture is without implements. Without manufactures all are destitute of fabrics of utility, convenience and elegance. But manufactures must rest upon agriculture and the mechanic arts. Without all the former, there can be no commerce. But without commerce there would be no exchange of commodities, and hence no division of labor, no mutual sustentation, and no wealth. Each solitary man would be himself an agriculturist, a mechanic, a manufacturer, to meet rudely and imperfectly his own individual wants. Without commerce there would be no improvement—no advance in human society. These are truths palpable to every one. Then let us be penetrated by the sentiment of this mutual dependence—let us act it out nobly and generously. Let no one be tempted by a present or partial advantage, to set one form of industry in opposition to another; to endeavor to make one succumb to another. Sooner or later the shock of such disloyalty will be felt in the whole circle of industry, and that part which at the first strengthened and enriched itself at the expense of the others, will sink under a common weakness and poverty. O ye sister arts of industry, ever embrace each other like the hours dancing about the chariot of the morning, that ye may alike move in a path of light and scatter flowers upon the earth!

And in connection with this mutual dependence of the arts of industry, should there be cultivated the sentiment of the mutual dependence of the different countries of the earth, and of the different places of the same country—the sentiment, I would call it, of the brotherhood of man. The Great and Good Being who has made the different climates of the world, and who has shaped the various aspects of the earth's surface into mountains and plains, and who has constituted all the varieties of soils, giving to each its natural products, and lodged mines here and there, and made thus a vast variety of capabilities, has taught us in all this that there are different kinds of work to be performed in different countries and places besides the work common to all, and that

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thus the inhabitants of different countries and places, as well as the men of different arts, are to work for each other, each to supply his quota of good things, which good things are to be universally diffused by an active commerce, so that every part may enjoy the good of all the parts, and men be made everywhere to feel the links which bind all together, and to understand that honesty and fidelity, fraternal sympathy, and peace and love, embrace the common interests and happiness of humanity. Crush the industry of any one nation, and all the others must experience the shock of a destitution. Crush the industry of any one part of a common country or state, and one spring of public and general prosperity is dried up.

There are some lands where the spice trees and the coffee plant grow, and others where vines and olives and oranges and the mulberry with the silkworm grow, and there are others for tobacco and sugar, and others for cotton and rice, and others for corn and all esculent plants most needful for man, and others with rich mines, and others with many streams affording power for all kinds of machinery. And the most natural and promising appropriation of human labor seems to be that which is indicated by the climate, the peculiar qualities of the soil, and whatever natural resources the conformation of the country may afford. Thus, labor would be most productive, and the earth be filled with the greatest variety and abundance of good things.

If, in connection with this, trade could be perfectly free, so that men might easily exchange their different commodities, we should have a state of things which Nature and Providence and Christianity have alike ordained. Railroads upon the land, steamships upon the sea, and the electric telegraph, all point to such a benign result, by making all nations immediate neighbors, and enabling them to trade and converse as familiar friends.

We may talk of nations being independent of each other, but it is mere human pride, and not Divine wisdom. God has designed that neither individuals nor nations should be independent of each other. One portion of the earth is as dear to God as another portion, and one nation as dear to him as another nation. Nature, and Providence, and Christianity, have not made the distinctions which we signalize, and of which we boast ourselves. Men were made to aid and bless, and not to destroy one another. And then will each part be most prosperous and

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happy when all alike act upon those principles which embrace the common good.

The arbitrary enactments of governments have so embarrassed commerce, that a nation like ours, well disposed to free trade, is compelled to protect itself by counter enactments, and to appropriate labor and skill, it may be, to unnatural products. Wherever an easy and natural barter cannot be effected, a nation must supply itself the best way it can by its own independent endeavors. But who does not see that the time is approaching when the Custom Houses of modern times shall take their place among the ruined strongholds of the feudal Barons? The mutual dependence of nations, like the mutual dependence of stars and planets, demands the recognition of each part in the perfect balancing of the whole. Some wild schemer might be ready to strike away some satellites as superfluous, or deem that where worlds are sown in space with such amazing profusion, a constellation or two might easily be spared; while a deep and true thinker, seeks in a more distant and hitherto unpenetrated region of space, for a new world to assure him of the stability of even the planet on which he treads.

Our country dwells under more gracious auspices in this respect than the nations of the old world. Were each of our thirty-one sovereign States a separate nation, then like the states of Europe, we might be held apart by Custom Houses and police regulations placed on the boundaries of each; and a journey from Boston to Detroit, might be attended by as many inconveniences and annoyances as a journey from Paris to Rome. But it is our glorious privilege to be a country consisting of many States indeed, and of States sovereign and free, and lying under every variety of climate, and possessing every variety of soil and product, but bound together by a federal compact which enables the people of all the States to mingle together and carry on trade without any impediment. Our perfect fraternity is not a condition of things which merely neutralizes the evils of a free intercourse and a free trade, but a condition of things which secures all the manifold blessings of a free intercourse and a free trade. It is the want of this fraternity which curses the states of Europe with the suspicion, malevolence and robbery of a police and tariff system.

I made a passage on the Mediterranean from Marseilles to Naples. I had in my trunk a few very good books of a philosophical character,

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which a friend in Paris had presented to me. At Naples they were taken from me to undergo a priestly inspection. I obtained them again with some difficulty, by the payment of a heavy duty. I purchased in Florence, some very harmless articles. At the Po, where I entered Austrian Italy, I not only was compelled to pay a duty, but I was threatened with a fine and a confiscation of the articles; inasmuch, as not dreaming of any offence, I did not declare them before I opened my trunks. I supposed that articles purchased on the Arno were still at home on the banks of the Po. In the nature of things, the prosperity of trade, and the well being of the children of men, I cannot perceive the difference between sailing from Marseilles to Naples, and sailing from New York to New Orleans; or the difference between passing from the Arno to the Po, and passing from the Hudson to the Delaware.

In our federal Union we realize the magnanimity, the moral greatness, the wise policy, the generous intercourse, the intellectual no less than the commercial advantages, of acknowledging and obeying the great law of the interdependence of nations.

But while in our mightier relations we obey the law of interdependence, let us not violate it in the lesser and more intimate. If it holds between state and state, and nation and nation, much more must it hold with respect to those smaller communities which go to make up states and nations. There can be no ground for strife between the town and the country, between the great city and the small villages, or between city and city, and village and village. The existence of the one sustains the existence of the other; nay, one cannot exist without the other; the growth and prosperity of the one, is the growth and prosperity of the other. London has been growing immeasurably, and at the same time Birmingham, Liverpool and Glasgow have been growing also: and indeed almost every town and village in the Kingdom.

The same is true of our own country. Boston, New York, Philadelphia and Baltimore have all been growing. But their growth, instead of preventing, rendered it inevitable that great cities must spring up in the West also. And every great city calls into being its satellites of smaller towns; and around cities and towns with their manufactures and commerce, there spreads out the richly cultivated and productive country. Every new farm and dwelling, every new village and city, every new manufactory or trade, shows new hands at work in the great

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field of industry. The more hands there are at work, the more there will be produced. With the increased population is the increased demand for products: with the increase of population is the increase of laborers; with the increase of products is the increase of trade. And this process must go on while there remains a foot of land to be occupied. Let us therefore feel that we have a common interest, that we are pursuing a common good. Let us not fear to be generous, magnanimous, and helpful one toward another. Let each one work on, skillfully and perseveringly, and cheer on his neighbor in *his* work. Let us eschew all envy and jealousy, and cherish a loving emulation. Let us not tread upon each other, but open new paths into the wilderness. Let us view every new enterprise as the birth of a new public good. Our waters are wide enough for all the ships that we can build; there is space enough for all the railroads that we can project; our lands are broad enough for many cities and villages; there is room enough for untold improvements; the sun shines everywhere; the rain falls everywhere; the streams are flowing everywhere; the earth is bountiful everywhere; and from the mines of Superior to the broad rich plains of the Peninsula, there is a country and a home for millions of prosperous and happy freemen. Let us then acknowledge our interdependence and our oneness, and never violate the charter of our common well being.

The only check upon this freedom of enterprise and exertion, is found in another principle—that of concentration or association. Perhaps, instead of calling it another principle, I should call it the positive side of the principle I have just been discussing. Because men and nations are mutually dependent, let them work on freely, without any hindrance or arbitrary regulation. Let each one produce that for which he is best fitted in his personal knowledge and skill, and in the outward circumstances and conditions which Nature and Providence have assigned him. Then, all, alike realizing their mutual dependence, will come to work for one and another, and be drawn together in the necessities of mutual support and the interchange of commodities.

This is the negative side of the principle. Do not meddle with those who have a common interest to do well and to be at peace.

But now, on the other hand, on the positive side of the principle, it is necessary that we should do every thing to cherish this interdependence,

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and be wise to take advantage of its conditions. To cherish it, we must ever be ready to acknowledge it and obey it. Neither pride nor jealousy nor selfishness must be suffered to lead us away from it, or cause us wantonly to violate it. It is by a good understanding and a good state of feeling, that we shall cherish it.

We take advantage of its conditions when we come to perceive, and when we carry out a proper combination of means and efforts. A railroad might possibly be made by each man making a piece of it through his own lands. But a first difficulty that would be experienced would arise from the desire of each man, when a route in general had been fixed upon, to bring the road through his particular domain; for there might be several possible lines in the same general route. And besides this, these several individual undertakings might violate the harmony of the whole, and would doubtless be a most expensive way of accomplishing the work. Since, then, we are mutually dependent, and have a common interest in view, it becomes necessary to combine our capital and labor by the formation of a railroad company. Again, improvements in agriculture, more or less, would unquestionably be made by each man on his own farm conducting solitary experiments. But who does not perceive how much more rapidly these improvements must advance by association, where the results of individual experiment are communicated to all; where principles and methods are discussed; where information collected from every part of the world is widely diffused, and where public institutions are established for agricultural education? There are a thousand examples of the same nature, which will at once suggest themselves to every one who bestows a moment's thought upon the subject. It is association, enlightened, confidential, and generous association, which carries on the great improvements of the world. God has made us so dependent upon each other, that we cannot work alone and be successful—we must combine our means and efforts.

A combination of means and efforts takes place under the most rigid despotism. Indeed the whole power of despotism lies in its ability arbitrarily to accomplish this. And it cannot be denied that despotism has completed the grandest and sometimes the most useful public works. It built the Pyramids of Egypt, and the Colosseum of Rome; it has also constructed the road of the Simplon over the Alps. It built Ver-

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sailles; it has also built the Louvre, and endowed the College of France; it built St. Peters; it has also collected the treasures of the Vatican. Despotism is mighty, because it combines means and efforts. Again, the power of association is shown in sheer fanaticism. It created the Empire of the Turks; in our own country, it is creating the Empire of the Mormons. Nothing can stand before association, whatever be the end which it proposes to itself, for it is in accordance with the laws of humanity and nature; and no great work can be accomplished without it. Even the feeblest creatures which God has made, become great by association; the bee, the ant, and the coral insect, are symbols of its power.

But the noblest and most benign form of association is the free association of enlightened men. Governed by no despot, but governed by a common thought; inspired by no fanaticism, but inspired by a love of the true, the beautiful, and the good; impelled by no blind instinct, but self-determined in the clear-sightedness of a cultivated reason, such an association becomes the highest representation of the Divinity on Earth, showing us knowledge and goodness, clothed with irresistible authority and might.

It may be said that in our country there is no want of association—that we have enough of is for good and evil in benevolent societies, and fanatical societies, and political societies; in railroads, banking and mining companies; and in all sorts of companies for which the human imagination can devise names and projects.

But then there may be a preponderance of evil, or vain and empty associations; and there may not be associations adequate to all the great and good ends to be accomplished; and the true principles of association may not be widely understood; and there may be many adverse influences at work where men attempt to associate for wise and good purposes, which require to be examined. The field is a large one, and I by no means purpose on this occasion, to enter upon it. But there is one evil which I would advert to, which while it exists, must seriously impede and often prevent association for good and momentous ends. I mean party, and sectional and local jealousy, and competition. We often see the operation of this in our National and State Legislatures. For example, a navy yard, or a mint, is to be established, or a harbor is to be improved, or a charter is to be granted to some company,

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or some great public institution is to be located. Now here is some benefit contemplated, unquestionably of a public character. Every harbor belongs to the Union, and indeed to the world; navy-yards and mints are national; every railroad is a public accommodation; and institutions whether for learning, or art, or benevolence, when constituted on right principles, diffuse blessings on all sides. The sun fills the heavens with light, and yet all the planets cannot be equally near him; but it is better for Saturn, Herschell and Neptune that the sun should exist, although they cannot bask in his beams, like the Earth, Venus or Mercury.

The mint, the navy-yard, the institution, must be somewhere in particular; the railroad cannot go winding about at every man's door, but ought to go in as direct a line as possible. But if not capable of ubiquity, and some certain place must have the honor and advantage of the location, that does not destroy those more essential and general advantages which form the true reasons why the public work should be undertaken at all. The mint is not located in Philadelphia or New York, merely to benefit those cities, but to benefit the Union. It cannot help proving a benefit in particular to the city in which it is located; but the question of its location must be determined by entirely different considerations. In all such cases, we are to throw ourselves upon the intrinsic merits of the question. We are not engaged in bestowing favors upon certain cities, town or villages; but, in some great enterprise for our common country, or for our common humanity, and the glory of God. We are associated, not to decide between party competitions and jealousies, nor to gratify any local cupidity; but to do this great and good work, whatever it may be, simply because it ought to be done. Where these petty competitions and jealousies are allowed to enter, attention is directed from the grander and true object, to another both inferior and false. The adjustment of these small conflicting claims by the *log-rolling*, as it is technically called, is an expedient which every true man must deprecate. Can we not appropriate money to fortify the Narrows at New York, in order to protect our commercial emporium, unless, at the same time, we appropriate money to remove the mud from some channel at New Orleans? Remove the mud from the channel, if it ought to be done; but what has that to do with the fortification of New York? Can we not build a hospital for dis-

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abled seamen at Boston, without engaging at the same time to build an arsenal at Baltimore? The hospital and arsenal may both be necessary; but cannot Baltimore allow a work of charity to go on unless she can derive some benefit from the public funds? When we associate for the purpose of rescuing Sir John Franklin at the North Pole, must we be diverted from our object by the selfish cry of the Sandwich Islanders, that we are spending too much money in the region of the Esquimaux? Great works of industry require association—in association lies the possibility of their achievement; but no association can be compact or energetic, unless pervaded by the spirit of the work in view. We must be magnanimous, truthful, and unselfish. The mechanism of human association, like the mechanism of nature, must have its harmony and strength in principles, which in themselves true and good, take the hue of a divine decree.

Thus far we have spoken of that form of industry which has its chief instrument and symbol in the human hand.

We turn now to another form. Man is not the only creature who works. The bee, the ant, the beaver, the coral insect, the fowls of heaven, the mole under the surface of the earth, work also. When man began to work, he worked, perhaps, more imperfectly than all the working creatures. But see how different it is now! The bee made its hive, the beaver its dam and hut, the ant its mound, the bird its nest, as skilfully on the first day of creation as to-day. There was a degree of perfection at once, but no after progress. But man from the smallest and most imperfect beginnings, has made himself the most varied, perfect, and glorious of all workers. And why this difference? Because the creatures of mere instinct were limited by that instinct which gave them at once the compass of their powers.

But man, the creature of reason, of reflection and thought, had in these an unlimited power of self development, and consequently an ever progressive power of outwardly expressing his thoughts and designs. The ever unfolding power *to know*, led on the exhaustless power *to do*. With him, therefore, industry took two forms—the industry of the hand, and the industry of the mind. Thought and work make up the twofold and glorious scope of his being. No irrational creature hath a hand like the human hand, because no such creature hath the thought to guide it. The more perfect instrument corresponds

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to the higher endowment. All visible works of human industry rest ultimately upon the invisible working of the thought within. Why was not man content to retain the world in the state in which it was given to him? Simply because it did not answer in its rude state, to his thoughts and desires. Just as he is destitute of knowledge and cultivation, he is content to retain the world in its rude state, or to attempt very few improvements. Such was the condition of the savage tribes who once possessed these regions. The savage retains the world as he finds it, because he is destitute of knowledge and education. He has not the industry of thought, and therefore he has not the industry of the hand. By this industry of thought, man in some age, in some country, conceived of a higher utility than the rude wilderness around him afforded. His first experiments upon improvement were doubtless very crude, as his first ideas were crude. In making experiments, his thoughts were more and more quickened, and his conceptions became clearer, richer, and more definite. Work expanded his thoughts, as his thoughts inspired his work. His hand and his mind carried on a reciprocal action. Indeed this reciprocal action never ceases in the progress of humanity. Knowledge must direct the hand, but the experiments of the hand ever serve to enlarge the sphere of knowledge. And thus there was growing knowledge and growing skill—fresh discoveries and new inventions—a more perfect acquaintance with the laws of Nature, and consequently a more perfect mechanical and agricultural art. Who does not see that it is knowledge that has made man the most perfect worker of all God's creatures?—that the development of his mind was the necessary condition of all outward and material improvements?

But man conceived not only of a more perfect utility, but also of a more perfect beauty. Doubtless he was stimulated by the beauty of nature; but from the fountains of his own thoughts he conceived of proportion, symmetry and grace beyond what was naturally represented to him. Hence originated all the arts of design, and he was led to make gardens and beautiful landscapes, to build houses and temples and ships, with the art of the architect, and to call into being all the fine arts. Thus he spread beauty over utility. Thus he made the world both more beautiful and useful than he found it. By the industry of his thought, again, he conceived of his social and moral relations—he found out that he was responsible, and a subject of law and government. By

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degrees he developed systems of ethics and jurisprudence; he established a grand social system, and instituted religious worship. One discovery led to another—one conception led to another. The more he thought and observed, the wiser he became to plan and organize society. The more improvements he effected, the more there opened to him the possibility of further improvements. In the light of his reason, in the light of his experience, and oft supplied too with a supernatural light by the Divine and Gracious Father of the Universe, he went on from age to age moulding all the materials of the earth with his plastic hand, perfecting science and art—perfecting social organization, until the world became as we see it to-day—a world of nations—of governments—of arts and of commerce—of sciences and religions—in fine, a world of civilization, showing the triumph of the human reason, and the human hand.

If the question were asked, which form of industry has predominated —that of thought or of work—no one would be prepared to say that the industry of thought has been the least either in importance or degree. Nay, are we not compelled to confess that the great industry of man has been the industry of thought, since all the improvements of the world are but the visible exponents of thought? Wherever there has been thought, there has been improvement in the outward state of the world; where there has been no thought, there has been no improvement; where thought has ceased, improvement has ceased; with the revival of thought, there takes place the revival of science, art, commerce, law, letters, of everything that elevates and adorns human society. Ignorance is barbarism; and barbarism is stupidity, sterility and desolation. Knowledge is light, power, utility, beauty and the glory of nations.

At the beginning, the same man was the thinker, the agriculturist, the mechanic. In the growth of society, in the advance of civilization, a separation into classes become necessary. A division of labor is the palpable sign of progress and perfection. Thus the useful and fine arts, thus commerce, government and religion, all came to have their representative and working men. And then too as science and philosophy advanced, they came of necessity to have their representative and working men also. Knowledge, indeed more or less pervaded all classes, and the more it can be made to pervade all classes the better—let work

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and thought, even in the humblest departments of work, ever be united. This is the true condition of man. But as the field of knowledge became more and more surveyed, as its subjects multiplied, as its discoveries increased, as the possibilities of its advance became more and more apparent, as its applications to the useful arts and to all human works stood forth more palpably, as it grew into systems that required time and labor for their acquisition, and method and skill for their diffusion, and unfolded the great idea of education,—a class of scientific men and philosophers could not but be called into existence.

These gave themselves up exclusively to thought, and to scientific observation and experiment. In their labors, the second form of industry became fully developed. Could we write a perfect history of the development of thought, we should have in that, a perfect history of industrial progress under both forms. Nay, even the biographies of philosophers and scientific men must comprise the main points of this history. Astronomy is the parent of navigation and of commerce: the science of mechanics, the parent of all our machinery: the science of chemistry, the parent of agriculture and manufactures: metaphysics is the parent of ethics and jurisprudence. The great thinkers, the acute observers and experimenters have gained for us all the laws and principles which have directed and ripened our material industry; and all the laws and principles on which the great social fabric is constructed. Are not the names of Watt and Fulton identified with all the wonders of the steam engine? Are not the names of Davy, Faraday and Liebig identified with the useful arts, and with agricultural science? Is not the name of Morse identified with the Electric Telegraph? One such man introduces a new era of progress. One such man affects the whole industrial activity of the world. The solitary student—the recluse scholar becomes the great benefactor of mankind. The busy world—the moving wheels of human activity are everywhere seen; let it not be forgotten that the moving power is the silent thoughts of the man who lives only to think. The comparative condition of different nations in respect to the industrial arts goes to illustrate the same truth:—industrial prosperity keeps pace with intellectual development. It was so among the modern nations.

Those nations which give the greatest attention to science, literature and the arts are the very nations where the mechanic arts, agriculture

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and manufactures are carried to the highest perfection. Would you perfect the industry of a people, then perfect their system of education. And when we perfect their system of education we refer to education in all its parts and degrees:—education of the highest forms to make philosophers and men of science to do that higher work, which necessarily belongs to a class exclusively devoted to thought, observation and experiment; and education for the working classes, so that work and thought may go on together according to the laws of our being, and the constitution of the world in which we live.

You are aware that I have just returned from an extensive tour in Europe. A considerable portion of my time has been spent in Germany, and particularly in the Kingdom of Prussia, for the purpose of making observations upon the educational system and the industrial arts of the people. On this occasion I cannot enter upon those details which I hope to embody in a Report to the Regents of the University. I will, therefore only state in general, that in Prussia I have found the most perfect example of the proportionate and harmonious development of the two great forms of industry—the industry of the hand, and the industry of thought. In referring to the Prussian system here, I do not say, that in being worthy of admiration and imitation, it may not still require modifications under our peculiar institutions; I wish to be regarded as stating facts and not as discussing formally the merits of the system. First then, as respects the educational system of Prussia, I remark, that it is a system designed both to make men of the highest accomplishments in science and literature—to raise up a learned class, and to diffuse education among all the working classes.

The law of Prussia is, that every man shall send his children to school until they are fourteen years of age; at his own expense, if he has the means of paying for education, at the expense of the State, if he has not the means. Children, however, are permitted to be employed in the manufactories at twelve years of age; but, then the proprietors of the manufactories are compelled to connect a school with their establishments, that the education of the children in the primary branches may be completed. The Gymnasia, are designed particularly for the higher forms of education. Pupils may leave the primary or common schools, and enter the Gymnasia. But more commonly those who aim at a higher education, enter the Gymnasia at once, say at six years of

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age, where they remain until they are nineteen, when they may enter the University upon examination.

The Gymnasia are of two kinds, the Learned-Gymnasia where the classics are made the basis of education; and the Real-Gymnasia, where the Sciences are made the basis. The Sciences and Classics are taught in both kinds, but there is a difference in the method. In some of the Universities, students have been admitted upon a mere scientific preparation, although this is an evasion of the general law. The teachers in the Gymnasia are prepared in the Gymnasia, and most of them have also gone through a course in the University. I have seen University educated men, teaching arithmetic, history and geography. The teachers in the primary schools are prepared in the Normal Schools, or Seminaries, as they are called in Prussia. The great excellence of the Prussian system is that none but thoroughly prepared teachers are employed.

But in addition to the primary schools, the Gymnasia, and the Universities, which are all open to the people indiscriminately, and at a very moderate expense, there are also schools for the arts and trades. There are three descriptions of these to which I would advert—the Royal Artizan's School, at Berlin, with its dependencies; the Royal Academy at Berlin, with its dependencies; and the Agricultural Schools.

There are many Artizans' Schools in the provinces, where an education is afforded with particular reference to mechanical pursuits. The best pupils in these are admitted into the Royal School, and supported there outright. Others are also admitted, subject to no expense but that for clothes, board and lodging. No pupil is admitted into the Royal Artizan's School, under seventeen years of age. The candidate must have studied the mathematics preparatory to the Calculus, and must have wrought at least one year in a mechanic's or engineer's shop. One year, they study together mathematics, natural science and drawing. After this they are divided into three clasees—the class of Chemists, the class of Engineers, and the class of House-builders. These designations, however, are quite general. The class of House-builders embraces every thing relating to architectural design and ornament. I found Kiss, one of the greatest sculptors of Prussia, giving instruction to the house-builders, in his art. The class of Engineers also embraces every description of mechanical work to which the arts of design are

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applicable. The class of Chemists is taught to manipulate or make experiments by a very distinguished chemist—Rammelsburg—well known among scientific men. Indeed several professors of the University give lectures in this institution.

At Berlin, all the apparatus of education, as well as the most distinguished men, are congregated, so that every institution located there cannot but be well supplied. The Prussian government well understands the perfection and efficiency to be derived from concentration.

The Artizan's School is also supplied with a most complete and admirable set of philosophical apparatus; with well appointed work-shops, and an engineer's shop; with every description of models in the useful arts; with a rich gallery of plaster casts of the most celebrated pieces of sculpture; with a full and appropriate library; and with a reading-room containing all the scientific journals of Germany, France, England, and America.

When I entered the Royal Academy, I expected to find merely a school of artists: what was my surprise to find there also a school of mechanics! I found there indeed two hundred young men receiving instruction as artists simply: but I found there besides, thirteen hundred mechanics receiving instruction in the arts of design—house-builders, house-painters, smiths—indeed men of every trade to which the arts of design are applicable. The system of instruction embraced a complete course, from the simplest elements of drawing, up to drawing and modelling from the living figure. These pupils paid one dollar a year, and were taught by finished artists.

In speaking of the Agricultural Schools, I shall not refer to Prussia in particular. The chief Agricultural School of Prussia, which I had intended to visit, was closed for the summer vacation when I reached there. I visited, however, the school at Hohenheim, near Stuttgart, which claims pre-eminence over all the others, and has served as a general model. I visited also a model farm near Leipsic, and a model farm and school near Munich. I found that what we call agricultural science is widely diffused through Germany in the instruction and lectures of the Gymnasia, the Universities, and the Artizan Schools. Chemical science in its wide scope has really come to embrace what is strictly the science of Agriculture.

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At the model farm near Leipsic, there is no course of scientific instruction, but the sons of farmers are received as laborers, and receive purely practical instruction under the direction of a superintendent. The school and farm near Munich is attended also by the sons of farmers exclusively. A portion of every morning is devoted to the school-room, and the remainder of the day to work. The scientific instruction here is elementary.

At Hohenheim, I found a model farm of seven hundred acres. The buildings, once a palace, are extensive. There is a room filled with models of all agricultural implements that, I believe, have ever been invented. I found here among the rest, some American ploughs which had been in the Great Exhibition at London in 1851. In another room are collected specimens of all seeds and grains. There is a large stall of specimen cattle. There are a brewery and a distillery. There are a botanical garden—a nursery of forests trees—a nursery of fruit trees—and a vegetable garden. There is a portion of the farm laid out for purpose of making experiments upon different kinds of products and manures. And there is a large portion of the farm where farming in general is carried on according to the most approved methods. There is also a large work-shop where ploughs and other agricultural implements are manufactured for sale. I saw a quantity of beautiful ploughs packed for Bucharest.

There are here two classes of students, First, the purely scientific class—composed principally of young men of means and estate. This is the largest class, consisting of about one hundred young men. The course of instruction is conducted by able professors—among whom is Thaer, well known for his very able work on agriculture, copies of which in German and English will be found among the agricultural works I have purchased for our University Library. The studies embrace, among other branches, natural philosophy, zoology, botany, and chemistry, with their applications to agriculture. The second class consists of the sons of farmers, and the course is similar to that near Munich: a portion of the morning being devoted to elementary instruction in agricultural science, and the remainder of the day to work. This class numbered, when I was there, some twenty-five or thirty young men. They were charged for board and tuition, and received wages for their labor. Besides these, about a hundred and fifty laborers are employed

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on the farm. I saw on this farm fine specimens of drainage also. The land required it, and I saw some fields which had entirely changed their character by means of it.

I was of course shown into the library of the institution. "How many volumes have you?" I asked: the reply was—"Our library is still small and young—we have only 10,000 volumes." For my part I thought it a very respectable number of books. But Germany has her libraries which number hundreds of thousands.

The school at Hohenheim is certainly a very perfect model of an agricultural institution. I have brought with me programmes of its studies, its principal text-books, and a catalogue of its library. We can unquestionably learn much from it. And yet the number of students is small compared with the other institutions of Germany. Indeed, I did not learn that the Agricultural Schools are generally so numerously attended as other institutions. This is to be accounted for, I think, by the fact that agricultural science is not confined to the Agricultural Schools, but is taught wherever the other sciences are taught. A model farm as depository of seeds, grains, and models; a place for breeding choice stocks of cattle; of cultivating nurseries, and making experiments upon products, soils and manures, connected also with a shop for agricultural implements, may be made of great value, if placed under the proper direction. My impression is that the model farm of Hohenheim is of great practical value considered independently of the school. Education is given elsewhere as thoroughly; but the farm is an experimental affair, and an agricultural depository, independently of the school. If there were not ten students assembled there, it might still produce invaluable results.

The wide diffusion of education in Germany, and in Prussia particularly, shews its results in their industrial life. Large districts of Prussia possess a light sandy soil. Berlin is situated in a plain of sand.

Prussia has no sea-ports except on the Baltic. She has repeatedly been subject to the most desolating wars; and she has kept up a large standing army, equal in all warlike appointments to any army in Europe. And yet she is flourishing and advancing. She seems with calm strength to rise above all her disadvantages, whether political or natural. I think this only can be explained by the character of a people universally educated and disciplined to economy.

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The sterile fields are reclaimed and cultivated to their utmost capacity, by a skillful, economical, and laborious agriculture; and all her mechanical arts and her manufactures are quickened by science. Every thing in Prussia wears a solid, substantial and finished aspect. I believe there is no humbug in the character of the Prussian people. In making these remarks on Prussia, I do not mean that other parts of Germany cannot boast of the same characteristics. Indeed I am disposed to look upon the whole German race as at the same time the most intellectual and the most practical of all races. The reproach which is sometimes cast upon Germany, that it is a region of mere theories and dreams is quite undeserved. The Germans theorize, but they work also. Thought and work both belong to them. They have exalted and honored industry under its two-fold form.

The praises I have bestowed on Germeny cannot be objected to if they are deserved. Nor will it be thought ungracious to award them here, when we reflect how large a portion of our most valuable emigrants are Germans. Besides, do we not boast of our Anglo-Saxon blood, and is not the Anglo-Saxon and the German of the same Teutonic stock? Still, I grant that no race may claim for itself the exclusive endowments of industrial activity, whether of thought or work. Perhaps the peculiar characteristics of the American people will be found to arise from the fact that they are a mixture of the most energetic specimens of several races, thrown among circumstances best calculated to call forth manly endeavors of intellect, enterprise and skill.

Other countries besides Germany are well worth our attention on account of their industrial developments. I will briefly advert to two—Italy and England.

Italy is interesting as exhibiting what I conceive to be very ancient forms of industry. Here we see the land is still covered with corn, the vine and the olive tree. And the modes of cultivation, and the very implements of husbandry continually call up images of the past. The culture which prevails does not appear like the result of any new ideas or experiments, but as an ancient and fixed habit of the people. They seem to be treading in the paths of their fathers. This impressed me particularly in a six day's journey from Rome to Florence, by what is called the Perugia route—so called from the old Etruscan city of Perugia, which, as well as other Etruscan towers, lie upon it. The Etrus-

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cans, indeed, long since melted away under the Roman sway, their history and language well nigh perished; and yet they have left behind them, in a way that cannot be mistaken, the impress of their civilization, their industry, and their arts.

Near Perugia ancient Etruscan tombs have been excavated. Into one of these I descended; and there the sculptured marble of the tombs—the marble effigies reclining upon them—beautiful specimens of art—of art that might vie with the Grecian—appeared as fresh and perfect as if but recently executed. Then I ascended to the world above, and looked about upon the fields, and looked toward the walls and spires of Perugia reposing upon its ancient hill, and reflected;—the men who first built that city and worked these fields were the men who wrought these forms of beauty upon the tombs; their successors have not been able to improve upon their conceptions of symmetry and grace—have they improved upon the arts of industry? Are not their fields to-day what they were four thousand years ago? How wonderful the triumphs of mind, genius and taste—impressing themselves in the form of old prescription and habit even upon races who have lost their spirit! How wonderful too the bounteousness of Nature!—the plow which has turned over these fields four thousand years, still finds the same fertility, and gains the same rewards of industry; and corn, wine and oil still abound to strengthen and cheer man's heart, and to cause his face to shine.

The Perugia route leads the traveller through a most enchanting country often awakening dreams of Paradise, and a country, too, of great fertility. But here, although rich pastures abound, and that fine breed of white cattle with their clean branching horns—a breed celebrated in poetry; a luxury very common with us can scarcely be found—I mean butter. You may have beef and bread, but you look in vain for butter. In Rome the market is supplied with good butter; and once on my journey to Florence, when I asked for butter I was supplied with a small piece which had been brought from Rome. The bread of Italy, however, is generally good, and in the principal towns very excellent.—Bread-making is probably the most ancient of the culinary arts. The charred loaves taken from Pompeii and still preserved at the Museum at Naples have a very familiar and home-like aspect. Bread-making in Europe is carried to greater perfection than with us. No better bread

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can be found than in old Rome, where universally the proprietors of the wheat fields in the country are themselves the bakers, who make bread for both city and country.

In Lombardy I was much interested by the system of irrigation which is there very prevalent. The water is conducted from the streams and reservoirs in channels around the fields, and made to flow over them at pleasure by opening sluices. I could not help thinking of Michigan, in connection with this. It seems to me that from the face of our country—generally gently undulating, and the numerous natural reservoirs which we possess in the lakes scattered over our country, we could easily introduce a system of irrigation which might protect us against those droughts which not unfrequently occur.

Now that I am speaking of Italy, there is one part of its agriculture, and its bearing on the moral condition of the people, which I ought not in candor and truthfulness to pass by. I mean the cultivation of the vine. The vine forms an attractive feature in an Italian landscape —trellised from tree to tree, and hanging in graceful festoons. The fruit, too, during the season, forms a most wholesome and important article of food. But beyond this, vast quantities of wine are made from the grape, so that wine is very cheap, and forms a common drink among the people. Bread and wine, indeed, is an ordinary meal; or bread, wine, and the olive, thus uniting in one meal, the corn, wine, and oil. Now what is the effect upon the morals of the people? The first effect is, that the use of wine banishes the use of alcoholic or distilled liquors. As a people, they drink wine, but as a people, they drink nothing else. But more than this, the use of wine in Italy, is not connected with intoxication. I have traveled extensively through the country—I have visited nearly all the cities, and many of the villages—I have seen large gatherings of the people on fete-days, when various amusements were going on, and yet, I have never seen an intoxicated Italian. And yet the Italian people are not remarkable for virtue in general; on the contrary, travelers concur in representing them as superstitious, ignorant, much addicted to lying and cheating, and lewdness, and not reluctant to rob and murder when an opportunity serves. But whatever may be their vices, and their degradation in other respects, they cannot be charged with the vice of intemperance. The Italians need a reformation in many particulars—there are no people in Europe who need it

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more, and yet no one acquainted with them can say in candor that they need a temperance reformation.

It would seem that the habitual use of their native and unadulterated wines creates a distaste for strong drink, and really serves to preserve them from that dreadful passion, which desolates other countries, and against which, in our country, we feel constrained to form associations and enact laws.

Now, contrast the Scotch with the Italians. The Scotch, as a people, are far removed from superstition; as a people, they are well educated, and they are accounted remarkably virtuous and religious; and yet intemperance prevails among them to an alarming extent. But the Scotch use strong drinks—they quaff the *mountain dew;* a very poetical name for whiskey, but this does not prevent very unpoetical effects.

My observations in other wine-growing districts—in France, in Switzerland, and upon the Rhine, corresponds with my observations in Italy. I have not visited Spain and Portugal, but I have conversed with travelers, who, by extensive travel and long residence, have made themselves familiar with the habits of the people of these countries. Their testimony is uniform. These countries produce large quantities of wine, and the inhabitants habitually use wine; but whatever may be their vices or degradation in other respects, they are a temperate people, and intoxication is not one of their vices.* If these are facts—and I, for one, cannot doubt them—then the conclusion is forced upon us that the wine growing countries are the only really temperate countries.

I have laid before you the facts; they are facts which demand serious examination and reflection; and if the conclusion above stated be a just one, then the agriculturists of our country are called upon to introduce a cultivation which shall provide a natural and genial substitute for strong drinks, and thus sweep intemperance from the land. Prohibit the distillery, prohibit the sale of alcohol, and of alcholic mixtures, falsely called wine; but let our hills be covered with vines, and let that pure, simple wine be used, which not intoxicateth, but which "cheereth God and man."

*Mr. Brace in his book on Hungary gives a similar account of the temperance of the Hungarians, with whom their native wine is a common drink.

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My sojourn in England has not been as long as I had anticipated. A country whose agricultural and domestic economy is so remarkable, claims more extensive and particular observations than those which are possible to the transient traveler; and I purpose during some summer vacation to cross the *ferry* between New York and Liverpool, for the purpose of visiting, at my leisure, the rural districts of England. A more scientific and artistic agriculture does not exist in the world, than that which has been introduced by the enlightened land-holders of England. The result is, that a very small country is made to support a very large population. Waste land is everywhere reclaimed, and every variety of soil is appropriated to its fitting cultivation, and made to produce, perhaps, to its utmost capacity. England, therefore, wears the appearance of one beautiful and verdant garden, where science and taste have directed industry to the most beneficent results.

There are now only two things upon which I would venture to remark. The first is the system of drainage in England. If the irrigation of Lombardy would save us from the drought, the drainage of England would reclaim valuable lands in our own State. Thus we should be fortified against the dry and the moist.

The other remark relates to the hedge-rows of England. I might descant here upon the beauty of the hedge-rows. I might tell you how all the real beauty of England would be marred by our crooked rail fences, and how our own State would put on much of the beauty of England, could we remove our own fences, and write upon our landscape these verdant lines of poetry; but independently of this the considerations of mere utility and economy are sufficient to decide the question. A hedge-row is a perpetual fence—once made, with proper care, it is made forever. Nor does it require a long time to realize it. Five or six years growth make the hedge-row impenetrable. If, when you make your fence, you will at the same time plant your hedge-row, before your fence is half decayed, you will be able to remove it. And where you have old fences, which terrify you with the prospect of a renewal in a few years, if you will only plant the hedge-row, you may give up splitting rails forever.

Whether the hawthorn will serve our purpose, can only be determined by experiment. But we are not limited to the hawthorn—there are other plants, and among the rest the Osage orange, which can be

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employed. It appears to me that the attention of the Agricultural Society ought, without delay, to be turned to this object, as one of prime importance. In connection with this, the preservation of our forest trees, urges itself upon our consideration. Much wood will always be required for necessary fuel; and we shall find, sooner or later, that we have none to spare for unnecessary fences. The indiscriminate destruction of trees by the early settlers, who very naturally look upon all trees as their enemies—excluding the sunshine, and occupying the land which they wish to cultivate—leads to a waste, both of beauty and wealth, which centuries cannot repair. Spare portions of the ancient forest—let them stand to grace the landscape—and early reserve tracts of land, where the forest may shoot forth again, and be reproduced again, from generation to generation.

This is not the time or the place, to make many particular suggestions in regard to agricultural products, but since I have ventured on a few, I will add one more. I observed in Germany, that the *rape* is extensively cultivated, for the purpose of expressing from it lamp oil. I believe that it is the principal resource of this kind. The quality of the light which it affords is good, and the material less expensive than any other which they can command. I know not whether it has been introduced at all in American husbandry.

In turning now to survey our own condition, and in making an application of the principles I have discussed, I would, first of all, my countrymen, congratulate you upon the proud distinction of being American Farmers. You are freemen. The land which you cultivate is your own—you are no serfs. In your own dwellings, on your own acres, you are sovereigns—subject to no laws and no restraints, but those arising from your own free consent, given through your legislative representatives. You fear neither priests nor despots. You are exposed to no legalized oppression and robbery. You breathe freely; you feel nobly; you look to the past with honest pride, and with gratitude to Heaven; you look to the future with confidence. The land which you possess, your own industry and skill have won from the wilderness. You feel conscious of what enterprising, laboring, and honest men can do, when left free to work out their own fortunes. On account of all this, I congratulate you. I congratulate you again, that you are what you are—cultivators of the soil—the most pure and noble of all the

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forms of material industry. You dwell under the brightest sunshine; you breathe the serenest air; you perform the most healthful labor; you enjoy the most quiet independence; you possess the truest plenty; you are invaded by the least perplexing cares; you live amid the beauty, and under the ever open and benignant eye of Nature; you have the most undisturbed domestic enjoyment; your lives can be passed, exposed to the fewest temptations, in the contemplations and discipline which pertain to good men; and, as in the eye of Nature you have lived, so in the eye of Nature you can die, and look with faith and hope to brighter heavens, while your bodies repose in the bosom of that bountiful earth, which has ever been to you as a loving mother. Whatever may be the lot of the rest of us, how prone we are to look forward to securing at the last, a quiet home in the country, where we may think our last thoughts, do our last work, and breathe our last breath! This is the dream of the care-worn man of business, of the wearied statesman, of the poet and the philosopher. The greatest and wisest of our race have desired thus to close their lives:—the Roman Cincinnatus, Washington at Mount Vernon, and Webster at Marshfield, are examples.

But while we thus honor your calling, is it wrong to remind you of your responsibilities? While we tell you that you are really the lords of this country, and placed under the most auspicious conditions for your own enjoyment and moral elevation, may we not also tell you that the destinies of your country are in your hands; and that you who are cultivating these fields for the benefit of future generations of laborers, are sowing likewise principles, and planting examples whose fruits they must also gather?

I feel, Farmers of Michigan, that we have a common interest at stake, and that we share similar responsibilities. I speak now as one who has been called upon to take charge of your chief educational institution, and I think, therefore, I may assume to speak also in behalf of the Professors associated with me—in behalf of the Regents, the Superintendent, the Board of Education, the teachers of our various institutions, and of all particularly engaged in intellectual labor, and in the great work of education. We have a common interest at stake, and we have responsibilities similar to your own.

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I have spoken to you of the two great forms of industry—the industry of the hand, and the industry of thought. To you is especially committed the first; to us is especially committed the last. We also wish, as far as may be, in consistency with our peculiar charge, to work with our hands also, as indeed many of us, belonging to your ranks, now do. The more, also, you will join us in the industry of thought, the more we shall rejoice, for the more shall we all be prospered and ennobled. You agree with me that these two forms of industry are closely united—that the one cannot go on without the other. You agree with me that the useful arts demand the diffusion of science, and a class of scientific men, no less than the last demand the former. We must live or die together. Banish the one, and you banish the other. Come then, and let us join hands in fellow-feeling, in hearty fraternal sympathy and good will. We will stand by each other, that we may both live and do nobly for our country and our God, in the present and in coming generations. The University is your University—I wish to put it in your hands as much as possible—I wish you to make use of it. Send your sons there, and we will do our best to educate them for whatever pursuit you intend they shall adopt. Our pupils are now chiefly the sons of farmers, as indeed they necessarily must be; for subtract from the young men of Michigan the sons of farmers, and how many would be left? Indeed it is the sons of farmers, for the most part, who own the land, who become our men of business, and our professional men. We do not deny it—the sons of farmers are building up the State.

I have heard that the remark has been made, that we are *Aristocrats* at the University. This is partly true, and probably in time will be quite true. Perhaps I should say, we are trying to become aristocrats as fast as we can. And I promise you, if you will send your sons there, we will do our best to make aristocrats of all of them. But when I say this, you must understand what I mean by the word aristocrat. This word aristocrat, is a very much abused word. Originally and truly, it means the rule of the wisest and best men. It means that men of real character and worth shall hold the influence in society and the State. Of course, in its just meaning, no one objects to it—all approve of it—for there is not a more common sentiment in the human heart than that those should wield influence who deserve to wield it. It is just the principle of our democratical institutions, in opposition to a he-

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reditary monarchy and a hereditary nobility. Now I will tell you how this word came to be abused. Certain men in olden time, by violence and fraud, got possession of the land and the power, and they called themselves the best men, or the aristocrats, simply because they were the strongest. And since then, it has become the fashion to call all those aristocrats who gain influence through the mere possession of wealth, or through any unfair means, as well as those who inherit wealth and power from their ancestors. Thus the word came to mean something just opposite to its true meaning, taken etymologically—thus it came to mean power and influence wielded by the undeserving. In our country we can have no aristocrats by inheritance. The only aristocrats in the bad sense, possible in our country, are demagogues who have no merit but their cunning, and rich men who have no merit but their money. And these may arise among men of all pursuits and trades. Now the only way to put down this false and pernicious aristocracy, is to raise up the true one. Let intelligence, moral character and worth, be the test of merit. Let those be called the first class, whatever be their condition in life, who really in the eye of reason and of God, are the first class. Let, I say, all wise and good and truth-loving men, be accounted aristocrats, and let them hold the commanding influence in the State and in society at large. And let the number of such aristocrats be multiplied indefinitely. Would to God that the whole people of Michigan —that all who bear the honored name of *American citizen*—might become such aristocrats? And these are just the aristocrats that we are trying to raise up in the University of Michigan, and in all the schools and seminaries of our State.

I say, Farmers of Michigan, that our great desire is to make the University useful to you, and we are determined to do it. We will educate all your sons who wish to be educated for the different professions. We will educate those who wish to take a particular course to fit them for a particular business. We will educate those who wish to become strictly literary and scientific men. And beyond all this, we have established and will carry on, an Agricultural Department for those who intend to devote themselves particularly to Agriculture. Whatever be the determination of the people of this State in respect to an Agricultural School, we know not how to teach Chemistry, Botany, Mineralogy and Zoology, without giving a course of agricultural science. The sci-

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entific perfection of our scheme of studies demand it. We shall do this independently of any consideration as to the disposition of the lands appropriated by the State for agricultural education. Our aim is to make the University one of the first in our country, and, if we can, second to none in the world; and therefore, there is no branch of knowledge that we can lawfully omit.

If you ask for my private sentiments in regard to a separate Agricultural School, I will state them frankly, for I have nothing to conceal on this subject. Having no property interest in this State, I certainly may claim to be free from all sectional and local jealousy and competition. My judgment is, therefore, that whether we consult economy, or the possibility of creating any great and perfect institution of learning, we must concentrate our means and endeavors. We may establish one University when we cannot establish half a dozen. And it is better to have one great institution, than half a dozen abortions. One great institution must be located somewhere, because we cannot locate it everywhere; let us not split it into little pieces, which shall have no strength and value anywhere. An agricultural department belongs to the University. We already have the apparatus, the books, and the Professor, for this course of instruction. Why then begin an entirely new institution? It is impossible to conceive of any benefit in separating. Manifold and apparent are the benefits to be derived from concentration.

If other countries have separate agricultural institutions, it must be recollected they are older and richer, and have already concentrated ample means in creating great institutions. If divisions become expedient in time, they cannot be expedient in the early existence of educational institutions. Besides, even in the older countries, as I have already stated, comparatively few are educated at the separate agricultural schools.

The inhabitants of Detroit might have established the Observatory in their own city, and they might have pleaded the Observatory of Greenwich as a precedent. But they have wisely placed it in connection with the University, thus adding a glorious pillar to the great temple of knowledge which we are endeavoring to build for the honor of our State, and our whole country.

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Men of Michigan, happy are those, it may be said, who come upon the stage of life where institutions exist, perfected by the ages which have gone over them; where everything which the eye beholds is finished, and where the whole condition of society shows the grace and elegance of a ripened civilization! But far more noble and favored is their position, who are called upon to lay the foundations of great institutions, and to plant the corner stones of society, and to open the springs of knowledge, truth and beauty, to coming generations! The first is the lot of mortals—the last rather the office of divinities; the first may enjoy and be forgotten—the last will live in the sculptured forms of art, in the songs of poets, in the records of history, and in the undying admiration and gratitude of the universal human heart!

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COMMUNICATIONS.

THE CULTIVATION OF THE POTATO—ITS NATURAL HISTORY.

BY EDWARD MASON, GREENFIELD, WAYNE COUNTY, MICHIGAN.

In writing this treatise, I propose to give a short sketch of the Natural History of the potato, and of the manner of its introduction as a cultivated plant; and then to describe what science and practice have performed, in bringing its cultivation to the highest degree of perfection.

The Province of Quito, in Peru, is said to be the native soil of the potato. In this elevated region, it is still found in its natural state, with leaves much smaller than the cultivated plant, with white blossoms, and small, ill-flavored tubers.

In Botany, it belongs to the Linnean Class, Pentandria, under the name of Solanum Tuberosum. This term was first given by Gerard, an old English Botanist, who, in his Herbal, published in 1597, has given a plate of the plant, as "Solanum Tuberosum, the Virginian Potato."

In the natural system of Botany, it is placed in the 46th order, among the Solanacea or Nightshades—of these Doctor Lindley says: "they are all more or less poisonous; even those which are food, like the potato, have their share of deleterious matter, but not in the parts which are eaten." The leaves and stems of potatoes have frequently proved fatal to sheep.

The geographical distribution of the potato, may be confined to the gigantic mountain ranges of Peru and Chili, but the industry and enterprise of man have spread it over the face of the earth.

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Humboldt, the Prussian Philosopher, says—"The cultivation of the potato has become common in New Zealand and Japan, in the Island of Java—in the Boutan and in Bengal. Its cultivation extends from the extremity of Africa to Labrador, Iceland and Lapland. It is a very interesting spectacle, to see a plant descended from the mountains under the Equator, advance toward the Pole, and resist, better than the cereal gramina, all the colds of the north."

Potatoes were introduced into Ireland by Sir Walter Raleigh, in 1600. He had planted a colony in Virginia, by patent from Queen Elizabeth, and found the potato used as an edible root, among the Indians of that country. In Ireland, the cultivation of the potato was for a long time confined to gardens, but its valuable qualities becoming known, it soon spread over the Island, and was exported to foreign countries. In 1650 a vessel freighted with potatoes, sailed from Dublin for London, but was driven by stress of weather, into Formsby, in Lancashire, where the cargo was discharged, and Lancashire was the first county of England, in which potatoes were extensively cultivated; and it is famous at the present day for its excellent crops of that nutricious root.

A Physician, named Charles de l' Ecluse, introduced potatoes into Flanders or Belgium in 1660, but their excellence as an article of food, was not at first sufficiently appreciated, and they had only reached the gardens of Bruges in 1704, when a landed proprietor of the name of Venhulst, distributed a large quantity of them gratis—this caused their rapid and extensive cultivation by the farmers and gardeners of that country.

The Continent of North America is said to have been originally supplied from Peru.

THE CULTIVATION OF THE POTATO.

Having seen that the potato had its origin among the volcanic valleys and recesses of the Andes, where it no doubt has existed since the creation, I have traced the manner of its introduction among the nations of the earth, and I will now describe the mode in which it has been most successfully cultivated.

I have had twenty-five years extensive practice in raising potatoes, and the lessons that I have learned from that rigid preceptor, *experience*, cannot fail to be of use to Michigan Farmers.

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I have always seen the largest and best crops raised on new land, that is, land newly broken out of grass, but the field should be always ploughed for a considerable time previous to planting, in order that the roots of the grasses may be perfectly decayed. The deeper the land is ploughed, the better will be the crop. The greatest crop that ever I have seen, was raised on land which had been *trenched two spades deep;* and the second best, was on land ploughed eighteen inches deep. In the latter case, the work was performed by two ploughs, one following in the furrow made by the other, and turning up a considerable part of the subsoil. Parallel drains, three feet deep, according to the Deauston system, with subsoil plowing across the drains, are of great utility in potato culture, as they remove excess of moisture, and potatoes are a species of crop which delight in dry, friable soil, and cannot live in soil saturated with too much wet; at the same time, a certain degree of moisture is highly essential to their growth.

Land intended for potatoes should be deeply ploughed in the fall; if it be in grass, the double or paring plough should be used, and the grass completely covered. If it is not, it will come up between the furrow slices, and remain a lasting nuisance. In the spring, the plough, drag, and roller should be as early in the field as the weather will permit, and the land ought to be well cleaned, and completely *pulverized* before the sets are planted.

I approve of drilling in preference to hilling, for these reasons: First, in drilling, the greatest part of the operations can be performed with the plough, and sets will be placed at a uniform depth, which is not the case when potatoes are planted with the hoe. Second, the work can be performed with more expedition, and where the double-mould-board plough is used in opening and closing the drills, the superiority of drill husbandry, over every other system, is strikingly evident. Third, in drills each set is placed at a uniform distance, and each enjoys an equal proportion of earth, sun and air, which is not the case when sets are *crowded together in hills.* The produce of drills, when they are properly managed, is far greater than that of hills.

Drills should be made three feet apart, and the sets ought to be placed one foot asunder in the drills. In warm climates, the drills ought to be made *as deep as possible,* that the sets and manure may be placed away from the scorching influence of the sun. Sets, when placed

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deep, will strike root still deeper, and draw up moisture from the earth by capillary attraction, which will support the health and vigor of the stem and leaves.

Well pulverized soil will resist heat much better than coarse, lumpy earth. In guarding against the withering effects of heat, the roller is an excellent implement, as it pulverizes and compresses the earth so that it completely protects the roots of plants.

For all root crops, the land ought to be deeply tilled, and highly manured. In Belgium, the land intended for potatoes, is generally trenched with the spade, *nearly two feet deep*, the richest and best manure added, and waterings of liquid manure given occasionally, during the growth of the plants, all weeds being completely extirpated; it is thus that the Dutch and Belgians have been going on for ages, raising excellent crops in rotation, whilst the inhabitants of the older States of America, have been wearing out their land by repeated crops of wheat or tobacco, without rotation or manure; and when the natural effect of such a course appeared, in the exhaustion of the soil—they have fled, or are flying to the West, in search of new land, that they may pursue the same system.

Boussingault, the eminent French Chemist and Agriculturist, has even said, that "at first sight one may judge of the industry and degree of intelligence possessed by a farmer, in the care he takes of his manure heap;" and when it is known that well managed manure is a mine of wealth to the farmer, and that old neglected dung-heaps lose all their valuable properties, and *become nurseries of weeds and wire-worms*, it is surprising that men can be found, who permit a blessing to turn into a curse; but farmers are now becoming more enlightened, and more alive to their interest.

The tuber of the potato has been called a fleshy under-ground stem; but in that state it is a fibrous as well as a tuberous rooted plant—its numerous slender roots penetrating the earth to a depth of four or five feet, and extending to the same distance around the stem; from this, the necessity for deep tillage is evident; and when we see that each little root is, at its end, provided with a small porous mouth, called a spongiole, from its absorbing water like a sponge, and over this spongiole, a fine gauzy membrane, which strains, or filters the water before it is allowed to enter into the sap-vessels, the necessity for applying

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manure in a liquid state, or next to that, in the shape of *well-rotted compost*, is apparent.

PREPARATION OF THE SEED.

In the cultivation of the potato, as well as in the successful management of every kind of crop, a frequent change of seed is necessary, and in making this alteration, the farmer should always be careful to supply himself with the best seed, of the most approved and hardiest kinds; and the transition should be made from a poor to a rich soil—and from an early ripening climate or country, to a later district. For seeds thus changed, will endeavor to preserve their usual time of ripening, and come to perfection much sooner than those seeds which have been acclimated in the place.

In selecting seed potatoes, all mis-shaped tubers ought to be rejected, and due attention paid to the true shape of the kind; for instance, all *long* tubers, belonging to a round kind, are unnatural, and out of shape. Also, all *round* tubers, of a long description of potato, are deteriorated, and unfit for seed.

Different kinds ought not to be planted together, for the tops being of an equal height, give the field an unsightly appearance, besides, they will not ripen at the same time; and nothing denotes careless, slovenly husbandry, more than *mixed seeds* of any description.

Seed potatoes should always be cut into sets before they begin to grow; cutting at this time is called "dormant dissection," or dissection whilst the juices are asleep—if they are cut when in a growing state, the sets will "bleed," that is, lose many of their essential juices.

The top of the tuber, or crown set, is the best for seed. I have known many intelligent farmers who removed the crown sets from all the potatoes consumed in their houses, thus preserving the very best part for seed, and their crops succeeded well. Many experienced farmers plant their potatoes whole—when this is done, very small, as well as very large potatoes, should be rejected; tubers of the middle size make the best seed. Whole potatoes are apt to produce a great number of small, and a few large tubers; this an objection to their use.

Sets intended for planting should be cut large; three or four, or sometimes two parts, is enough to make of a tuber. After being cut, they should not be planted until the cuts are seasoned or healed; dry lime, or wood ashes is good to be applied to newly cut sets; they should

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not be permitted to sprout; if they cannot be planted in due time, they ought to be placed on a cool floor, and get repeated turnings, say every second day; they should be shaded from light—in this way I have known sets to be preserved perfectly safe for *two months.*

The London market gardeners have now adopted a mode of forcing the seed, in order to procure new potatoes at an early season; it is this —very early in spring, sheds are erected, in which a great many rows of shelves are fitted up. On these shelves the sets are placed in thin layers, and stoves are used to heat the sheds, and increase the temperature so as to promote vegetation in the sets; and when they have sprouted, they are taken down carefully, and placed in drills which have been prepared for the purpose; they are then covered with clay, the sprouts being unbroken, and their tops reaching within an inch of the surface; they soon appear above ground, and continue to grow rapidly, and outstrip those planted in the fall, or in the spring. One market gardener manages the seed of fifty acres in this way, and he says he never loses one by the blight, as his crops are all ripe before the periodic arrival of that destroyer. This is a much better plan than autumnal planting, which is recommended by some as a sure remedy for blight or rot. I have frequently tried fall planting, and I found that the evil counterbalanced the good resulting from it. Many of the tubers rotted during winter, and the ground became so hard, that a good return could not be expected from those that escaped. I found that potatoes properly planted in spring, produced earlier and better potatoes, and withstood the blight better than those planted in autumn. I have known farmers to be at a great loss by planting tender kinds of potatoes, which were not strong enough to withstand the blight, whilst others have reaped a rich reward from sowing *hardy kinds*, on which the blight or rot took little or no effect.

VARIETIES OF THE POTATO.

A great many varieties of potato are cultivated in Europe and America. Some of the more approved kinds are the Ash Leaved Kidney, the Cumberland Kidney, the Wicklow Bangor, the Cumberland Bangor, (all early kinds,) the Niggertoe, the Meshannock, the Cumberland Kempt, (early,) the Ox Noble, the American Apple, the Lumper, the Merino, (coarse, late kinds,) the English, Irish, Scotch, and Russian Reds, the White, Red, and Strawberry Pinks, the Early Kent, the Coppu, &c., (good

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table potatoes.) New kinds may be raised from the seed of the apple in this manner: let the apples or berries be quite ripe or nearly rotten; then wash away the pulp from the seed, and having dried the latter, put it up in a careful place, not too dry, for too much heat destroys the vitality of seeds—not too damp, for that too will kill them. Early in spring sow the seed on a hot bed in little drills. They can be easier weeded and watered in this manner, and thinned out, so as to enable them to produce middle sized tubers. When these are ripe, take them up, and select the best tubers, rejecting those which are worthless. Plant these tubers whole the next spring, and from their produce you may have some kinds worth naming and preserving.

BOITZRMBURG.

M. Zandu, of Boitzemburg, in Prussia, raised full sized potatoes from seed in one year, by sowing the seed on a hot-bed early in spring, and when the seedlings had attained the height of four inches, planting them out into drills prepared for the purpose. The drills were shaded, and the seedlings watered carefully until they had struck root; and after that they received several earthings. In this manner the plants were grown until the tops had attained the height of three feet, and produced full sized tubers.

Many varieties of potato have sprung from the seed of the same apple, the pollen of one description being mixed with that of another, or many others, by bees and other insects. The hybridirature of the potato, or the crossing of one kind with another, is performed by carefully mixing the pollen (that is the dust discharged by the stamens) of one plant with that of the other. The flowers operated on should be covered by a lace or gauze bag to prevent the access of flies during the mixing of the pollen. The anthers (these are the tops of the stamens) should be removed and the fine dust shaken over the wounded stamens, and into the calyx or cup of the flower. The operation is attended with uncertainty, as very few potato blossoms bear seed. Many have considered that one of the chief causes of the great potato failure was the continual raising of potatoes from the tuber instead of from the seed. Now this is a fallacy, for many trees and plants are raised from cuttings as well as from seeds; nearly every kind of poplar and willow can be raised from either seeds or cuttings. The sugar cane produces seeds but it is propagated by cuttings and layerings. The strawberry is pro

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pagated by its runners, and yet it produces seed; the Jerusalem artichoke is propagated by its tubers; from these facts we may infer that the failure of the potato *is not caused by the manner of its propagation.* The potato blight is caused by electricity, which produces the formation of nitric acid in the atmosphere; this being condensed by the cold, mingles with the dew, rain or moisture on the leaves of plants, and burns small patches or spots on the leaves; if dry weather sets in, these spots wear out; if the weather be rainy or moist, these gangrenous spots become enlarged, and continue to spread until the leaves and stem are completely destroyed. The rot is a necessary consequence of the blight; for when the leaves of a plant are destroyed by poison of any kind, *a partial or total destruction of the root follows.* The blight is not confined to the potato; many trees, plants and flowers are annually injured by it.

COMPOSITION OF THE POTATO.

From experiments which have been made, it has been found that the apples of the potato contain nearly as much alcohol as grapes. Starch, flour, and sugar have been extracted from the tubers; M. Sprengel found by chemical analysis, that one hundred thousand pounds of potatoes contained the following ingredients:

Potash,	390 lbs.
Soda,	234 "
Lime,	33 "
Magnesia,	32 "
Oxide of Iron,	$2\frac{3}{4}$ "
Silicia,	$8\frac{1}{2}$ "
Sulphuric Acid,	54 "
Phosphoric Acid,	40 "
Chlorine,	$15\frac{1}{2}$ "
Alumina,	5 "
	814 lbs.

The ashes of plants are in weight very small, when compared with the plants. Dried wheat straw in 1000 parts, contains but 70 of ash; potatoes give but 45 parts in 1000. By carefully observing the composition of the ashes of plants, we can ascertain the food, or manure which they require. Liebig says, "it is certain that the mineral sub-

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stances furnished by the soil, and found again in the ashes of plants, *are their true food*, and these are the conditions of vegetable life." One hundred parts of the ashes of the potato are found to contain:

Silicia,	5
Alumina,	6
Potash,	50
Lime,	1
Magnesia,	5
Chlorine,	2
Carbonic Acid,	13
Sulphuric Acid,	7
Phosphoric Acid,	11
	100

EARTHING THE POTATO.

A great deal of difference of opinion exists about earthing up the potato. A little attention to that subject will enable us to see, that if the soil is deeply tilled, well pulverized, and highly manured, very little earthing will be necessary. The tendency of the roots of the potato is *downward*, and we ought to enable them to *go down, by digging and plowing deep*. The tendency of the tuber is *upward*, and we ought not to prevent that disposition, *by heaping over it an undue portion of earth*. The best potatoes are always produced at the surface, near the genial influence of air and heat. Potatoes moulded too much, are never of a good quality; in this matter Nature seems to have set a boundmark for the farmer, by placing the collar of the stem at a nice distance between earth and air—beyond this collar no earthing should go; and if the soil has been properly prepared, much earthing will always do more harm than good; at the same time, *moderate mouldings will always be beneficial*, inasmuch as by this means hosts of weeds are killed, and the crust, which sometimes forms after heavy rain, will be broken up and removed. It is essentially necessary for the well-being of the vegetable kingdom, that the atmosphere be permitted to penetrate the soil, and reach the roots of plants.

INSECTS INJURIOUS TO THE POTATO.

Although the science of Entomology, or the history of the nature and habits of insects, was heretofore but little regarded by the farmer,

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its importance is now beginning to be understood; for the farmer finds that he has innumerable hosts of active little enemies to contend with, which are always at work, devouring and destroying his crops. The limits of this paper will not permit me to give a full description of these pests of the farm; but as the wire-worm is a special enemy to the potato, I will give some description of it.

The wire-worm is found in almost every climate, and feeds indiscriminately on every kind of cultivated crop; it attacks the potato in various stages of growth, frequently destroying the sets in the spring—eating into the roots, and cutting down the blossoming stems in summer.

It is said that more than seventy species of beetles are the parents of wire-worms; these beetles are called elaters, spring-beetles, &c., from a power they possess of leaping up when placed on their backs, and the noise they make in so doing. These beetles lay their eggs in the roots of weeds or grass, and frequently in old neglected dung-heaps, which form a snug retreat for the young wire-worms; they continue in the form of larva or worms for the space of five years, during which time they make woful destruction among roots of every kind. A full-grown wire-worm is an inch in length, of a shining yellow color; at the end of five years, the wire-worm forms a cell in the earth, in which it moults, and becomes a pupa or chrysalis; this chrysalis becomes a beetle in three weeks. In its winged state it is harmless, merely flying from flower to flower.

Many means of banishing the wire-worm have been tried, with varied success; these experiments have proved that white mustard seed, sown as a crop, will banish them; soda ash at the rate of two cwt. to the acre, will destroy them; chloride of lime will kill them; salt, used as a manure, kills them; rolling land, tends to drive them away. But of all the plans which have been tried, nothing succeeds so well as a proper rotation of crops, the total extirpation of weeds, and the careful management of manure.

BE EARLY.

In preparing your land for potatoes, as well as in every future operation connected with their cultivation, be as early as you possibly can. Plow your land early in the fall, that all roots, whether of grass, or corn, clover, or wheat, may be decomposed and ready to furnish food to the roots of the potato.

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Prepare your land early in spring, that your crop may be got into the ground in time, and an early harvest insured; but do not by any means plow or plant in wet weather. Wait a month for a favorable season, if it should not come sooner.

Earth your potatoes early, before the tubers are formed; if you do not, too much clay will be placed over the tubers by successive landings, and earthing late will retard the ripening of the crop, and it will probably be destroyed by blight.

Heap your manure early, that it may be decomposed and ready to afford nourishment to the plants.

Dig or plow out your potatoes early, just as soon as the tops are decayed, and store them up safe from rain and frost.

Finally, intelligent reader, if in this essay you have seen anything worthy of your approval, begin early and put it into practice.

SHEEP HUSBANDRY.

BY E. LAKIN BROWN.

J. C. Holmes, Esq., *Sec'y of the Michigan State Agricultural Society:*

Sir—Agreeably to your request, I will endeavor to give you the benefit of what experience I have had in sheep-husbandry; and although but a mite, still it is of such mites, collected and compared, that knowledge is made.

Wool-growing, as a business, in Michigan, is but just commenced; having hitherto failed to attract the attention of farmers to a great degree, for various reasons. First. Such as attend every new and sparsely settled country—the ravages of wild beasts, the want of suitable pasture grounds, and the difficulty of procuring stock. Second. The fertility and productiveness of the fresh and virgin soil, rendering grain-growing the great and controlling business, to the exclusion of everything else, even of all thought or perception of the ultimate ruin of those engaged in it. Third. The generally prevailing opinion abroad, and to some extent at home, that Michigan is not adapted to the wants and habits of the sheep. This latter reason has undoubtedly been a very effective one in preventing the introduction of the sheep from abroad, it being supposed the bleak and breezy hills of New England were es-

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sential to its health; although experience has abundantly proved, as might readily have been foreseen, that the green prairies, and dry, rolling openings, with their sweet and healthful grasses, and the comparatively mild climate and brief winters of Michigan, are much more conducive to the health and vigor, and productiveness of the sheep, than the cold and oozy pastures and long severe winters of Vermont. An important proof of this, as well as advantage to the Michigan wool-grower, is the fact that eastern manufacturers consider Michigan wool of the same grade, worth some cents on the pound more than eastern wool. It makes more cloth—is evener and stronger; in short, the sheep is healthier and more robust, and therefore the staple is better.

But if we compare the cost of production, the advantage will be still more apparent on the side of the Michigan wool-grower. I was tolerably familiar with sheep-husbandry in Vermont, in my youth, and I know that from the 1st of November to the 1st of May, might be considered winter months, so far as stock of all kinds were concerned—a long and tedious winter of six months, where fodder and grain are always scarce and dear. In Michigan, we may safely strike one month from each end of the winter, and in many favorable localities, and under favorable circumstances, much more. Indeed, in the vicinity where I live, I doubt whether the average time of foddering sheep will exceed three months. If we take into consideration the comparative cheapness of grain, the abundance of wheat straw in a great wheat-growing country, and the ease with which fodder of all kinds is produced, it must be apparent that the wool-grower of Michigan must realize ample profits, when in New England the business will not sustain itself.

The question as to what variety of sheep is best adapted to the climate, and will yield the largest profit, is one upon which there are many different opinions, and which experience and careful observation can alone determine. The Spanish Merino is undoubtedly one of the best, if not the very best in the world. The Saxon is delicate in constitution and light in fleece, and I believe it is not claimed anywhere, that it is suitable to constitute the general stock of the country. The great question, at present, seems to be in regard to the French Merino; either as an original, pure breed, or as a cross with the Spanish. Of the former I have not had sufficient experience to warrant a conclusion —in regard to the latter, I am strongly of opinion that it is a decided

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improvement. Four years ago my stock consisted of grade sheep, averaging, say, 7-8ths to 15-16ths Spanish Merino, the remainder Native. In 1850, I purchased of John D. Patterson, of Westfield N. Y., a half-blood French Merino Buck, and have now of his stock for three years in succession. I had before employed one of the very finest Spanish Bucks I ever saw. I find that my French Merinos are increased in size, the lambs stronger, the losses less, and the increase of the weight of fleece very marked. Last June my yearlings averaged five pounds per head, of clean washed wool; whereas, before I procured the French Merino, my yearlings had never clipped over 3 to 3½ pounds. It is indeed objected by some, that although the fleece is heavier, yet the staple is coarser than the Spanish. Perhaps so: the staple is longer and perhaps not quite so fine. But the difference is not such as to affect the price. I sold last year to a manufacturer, who pronounced it of the very first quality, "precisely the kind of wool that is profitable to work." And this, I take it, is the right kind to grow. Thus far, therefore, I have every reason to be satisfied with the new blood. I summer my sheep upon an opening farm, eight miles distant, and winter them on my farm at home, on Prairie Ronde; thus, having the benefit of a dry, sandy soil, for their summer range; and of a rank, unfed aftergrowth, in fact the general range of a prairie farm, in winter; which, unless the winter is very severe, goes far toward wintering them. I cannot omit to mention here, that in the summer of 1852, I sowed about twenty-five acres of flat turnips among standing corn, and in the winter let the sheep run upon them. The season had been extremely dry, which prevented the turnips from attaining to much size, but they were thick on the ground and a rank growth of tops; the winter was open and mild, and the turnips and a small meadow furnished nearly the entire food for my sheep through the winter, and I never saw a flock in better flesh and condition. I think it highly important that sheep should have access to green food of some kind, through the winter. Nothing can be better than flat turnips, and if they will grow with corn, it is an easy matter to have them at all times. I shall try it again the coming season. I have allowed them to run upon early sown wheat, the past fall and winter, but am apprehensive they have injured the wheat. Rye, sown early for their especial use, would, no doubt, be an excellent and cheap method. Corn fed to sheep will keep them in

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fine order, but if fed to much extent, will injure the lambs, and I do not think sheep kept in high order with corn, bear age as well; besides, if fed with corn one winter, they require it the next, or some equally nourishing food, and will not do well on hay without it. I therefore avoid feeding corn, if I have plenty other suitable food. In want of roots and green food, well cured cornstalks and good bright hay are the most desirable fodder.

Proper shelter, is second to no other consideration, in sheep raising. And I prefer an open shed, to which they can always have access, that will shield them from storms and the severest winds, and at the same time afford plenty of fresh air, to any close shut up place, where they are crowded in and become warm, and on going out into the cold air, take cold, and are constantly troubled with coughs and snuffles. They require a dry, sheltered place, but not a confined or warm one. A few posts set in the ground, covered with rails and straw, although not so neat and tidy, answers every useful purpose. The lambs should be taken from the dams by the first of September, and turned into some fresh and tender feed. I turn mine into the cornfield, or upon early sown wheat, neither of which will they injure at all, and by December they will be fat as seals.

How lambs should be dipped in an infusion of tobacco, to kill the ticks, and how sheep should be tagged in the spring, and all the other minor items of prime importance to the sheep-grower, behold, they are written in every book and treatise upon sheep-husbandry, and he that neglects them, it is not because of his ignorance, but of his indolence.

Schoolcraft, March 17, 1854.

THE OX AND HIS TRAINING.

BY C. W. GREENE, OF FARMINGTON.

J. C. Holmes, Esq., *Sec'y Mich. State Agricultural Society:*

Dear Sir—In compliance with your request, I send you an article on the subject of that useful animal, The Ox, and his Training.

Formerly, his value was determined by his weight, for the purpose of retailing by the pound, for the food of man; and even at the present

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time, perhaps there is not another animal or species of property, in which the farmer deals, the real value of which, is so much underrated; for example—a yoke of oxen, four years old, may be purchased for one hundred dollars, and at less than thirty-five cents per day, would pay for themselves annually, for at least four years; and if well kept, would then sell to the butcher for more than the purchase money. The whole expense of their working equipage during that period, need not exceed ten dollars; they can perform most kinds of farm labor, and for heavy draught, are more convenient than any other team; for clearing our forests, and subduing our opening and prairie lands, they are indispensable.

But the question may be asked—are all cattle suitable for labor? I answer—no. They should be selected and bred with reference to that fact, with the same care that horses are, where strength, action, and endurance, are wanted.

The following is a brief description of the more important points, which indicate a good worker:

Straight back, broad loin, deep chest. limbs fine, but well muscled, tail long and tapering, head clean and bony, horns clear, and not too heavy, eyes full, and good breadth between them, hair fine and glossy.

Heavy draught cattle, should be weighty; for traveling particularly, less size is better.

For several years past I have selected steers for training, with reference to the above named points, and in no case have they failed of making good working cattle, worth $150 per yoke.

It is not my purpose to discuss the relative merits of different breeds and their grades, as good cattle may be selected from each; but as a distinct class, would prefer the Devons for work; but any animal failing essentially in the above named points, I should reject as unsuitable for training, fit only for the butcher, and perhaps not that.

To describe the best method of training domestic animals, or the most successful mode of directing one's family, governing a school, or controlling an army, would be assuming quite too much responsibility, as there are no fixed rules that would be acceptable to every one's taste and fancy; and yet, I apprehend, similarity of treatment is discernible in every successful operator. The true secret of success lies in perfectly comprehending the disposition and capacity of the subject to

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be trained or governed, and in exercising all that judgment, promptness, patience, and perseverance, that the case demands.

My practice in training cattle is as follows: (I say my practice, for all my horses and cattle are trained by myself,) they are first put into the stable, tied by the head, and then made acquainted with the fact that they are not to suffer in consequence of my presence; this is done by kind treatment, feeding, handling, and rubbing them, for which they soon exhibit a fondness; they are then gently led out by the halter, and accustomed to being driven about the yard—in this exercise a small whip may be used sparingly—this process should be repeated until they exhibit submission; they are then returned to the stable, the yoke put on, and suffered to remain thus for ten or twelve hours; by this time they will have become reconciled to the treatment; the yoke should then be removed, and rest allowed them. After this they may be yoked at pleasure in the stable, or any convenient yard. The training is now fairly commenced; the word of command, and the meaning of every motion is next to be taught them. Every command should be given in a low, emphatic tone, accompanied by the hand or whip; the motion is learned quickly, and soon after they comprehend the language. Boisterous hallowing and whipping is folly, unnecessary and cruel, and should not be practiced in the training of any animal.

Having proceeded thus far, they are ready for field labor in connection with a gentle pair of oxen or horses, which should be able to perform the labor without any assistance at first, and very soon after they will find themselves very much relieved by their auxiliaries. Nothing further is necessary but practice, in the various kinds of labor to be performed, if the following precautions are strictly observed:

1st. Never attempt to yoke or unyoke them except in the stable, or some other secure place, until they become perfectly familiar with the operation.

2d. Never put them at a draught without the aid of a good pair of oxen or horses, if it is possible to avoid it.

3d. Never overtax them in hot weather, nor overload them before they know their strength and how to apply it usefully.

If the above hints are strictly regarded in the training of cattle, all unpleasant and dangerous tricks, such as hooking, kicking, balking, running away, &c., may be avoided, all of which is in consequence of bad management on the part of the person who trains them.

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The ox can appreciate kindness, and in time becomes a tolerable judge of what is reasonable; and under good treatment is one of the most faithful and useful animals allotted to the use of man.

Farmington, April 26, 1854.

ON THE AGRICULTURAL VALUE OF THE UPPER PENINSULA OF MICHIGAN.

BY CHARLES WHITTLESY.

J. C. HOLMES, Esq., *Sec'y of the Michigan State Agricultural Society:*

SIR—Mr. Shaply, to whom your request for a report upon the "agricultural and mineral" resources of the Upper Peninsula was directed, has this day desired me to accommodate you, on account of the pressure of his business. Such a report, upon a region so wonderful in its minerals, and so extensive, would, if faithfully drawn up, require the labor of weeks, and the space of a volume. It would not be a trifling undertaking, to present a full, reliable, and well arranged statement of the natural resources of the southern shore of Lake Superior. Your letter however, informs us, that it should be in press within half a month.

Nothing is more valueless than rambling and disjointed statistical matter; but I have determined to present you, without a moment's delay, such facts as occur to me on the subject, having first apologized for the manner in which it must be executed.

The capacity of the soil, along the banks of the streams that discharge into Lake Michigan from the north, is, so far as I have seen it, not very great. The streams I refer to, are the Pine, Manistique, White Fish, Escanawba, and Fort Rivers. Opposite these, and heading with them, on the Lake Superior side, are the Quequomenon, Miners', Twin and Chocolate Rivers, on which there is very little good farming land.

West of the Chocolate, is a woody and broken range of highlands, extending to the sources of the Menominee, the Wisconsin, and the Ontonagon; known as the "Huron Range." It is 1000 to 1100 feet above the Lake, with irregular valleys and slopes of good land.

This space includes the iron region, which extends from the vicinity of Marquette to the Twin Falls of the Menominee. All over the Lake Superior country, the Pine, Balsam, White Cedar, Spruce and Hem-

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lock, may be seen. But over large spaces, these evergreens do not predominate, and this is a sign of a more fertile soil. Where the slopes of the mountains are moderate, and smooth, there are the Birch, Sugar Tree, Elm, Linn, and occasionally a Spanish Oak. I never saw a Chestnut, or Hickory, and but very few Beech trees.

That portion of Point Keweenow which lies east of Portage Lake, is much broken, but has, I should judge, as much tillable land in proportion, as the New England States. The trap rocks, (that contain the copper veins,) contain alkalies, such as Lime, Soda and Potash; and their decomposition produces a rich soil.

In the low grounds, and in fact, on slopes of 100 feet to the mile, the White Cedar takes so firm a hold as to exclude other timber, and constitute, a very great nuisance, in the form of innumerable swamps, that are nearly impassable. The cedar swamps, however, furnish the best of timber for the mines, and for rails. If any one wishes to get an adequate idea of the number and extent of these swamps, let him ascertain the number of acres that fell to the State, under the act of 1850, granting such lands to the States where they are situated. These lands, however, when cleared, make the best of meadow.

The remaining portion of the Upper Peninsula, from Portage Lake, and the Anse, west to the Montreal River, may be divided into two districts. That part lying south of the Mineral Range, on the head waters of the Ontonagon, Sturgeon and Menominee Rivers, is better adapted to agriculture than any equal space on the Upper Peninsula.

The Mineral Range is less broken and abrupt, west of Portage Lake, and offers a good proportion of farming land. The lands north of the Range, and between it and the Lake, are generally good. This belt of country, having navigable water and excellent fish on one side, and worked and workable mines on the other, offers the highest inducements to farmers, of any region I know of. It is a gentle slope, from the foot of the mountains to the water, with a soil of red clay and sand, containing lime in its composition. I am satisfied it will produce wheat well. It produces better grass than I ever saw elsewhere; and the same for potatoes, turnips, beets, carrots and cabbages. Oats do well, and rye, and peas. Very few varieties of corn will come to maturity. I am this season trying a little buckwheat, and millet.

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The cost of clearing land is great, unless the situation is near a harbor, or mines, where cord wood can be sold. The price of hay has never to my knowledge, been less than $25 per ton, potatoes $1 per bushel, and oats $1.

On Point Keweenow, the mining companies own most of the land, but would lease it to farmers at low rates, reserving the timber. There are on Lake Superior but few extensive pineries; no pine for exportation.

The climate is not the same in all parts of the Lake country, it being influenced by position and elevation. It is, however, everywhere healthy, resembling that of Vermont. Navigation is closed on an average, five months in the year. In its present and natural state, it is less dangerous than on either of the lower Lakes, before improvements were made by the general government.

As yet very little attention has been paid to agriculture, owing to the absorbing interest aroused by the presence of copper and iron in bountiful profusion. But farming has been, and doubtless will be, the surest mode of acquiring property for those who are in want of capital, and have the will and strength to labor.

The best products of the country, hay, oats, potatoes, and turnips, are such as can never be successfully brought from a distance. I do not think that cattle, hogs, or horses, can be raised here profitably. The difficulties attending a commencement on a farm, are the cost of clearing and the expense of making roads. But in the vicinity of mines, roads are made by mining companies.

I omit all reference to the mining interest, for want of time to do justice to the subject; and also because the geological reports and public prints have made it comparatively well understood.

The diseases of the country are not yet understood, having generally been such as result from exposures elsewhere.

The waters of Lake Superior and the atmosphere, produce the happiest effects upon consumptive persons not too far gone with the complaint. Such persons resort here continually for the purpose of cure, and generally with success. It would anticipate the presence of rheumatic difficulties, in time. During severe seasons spent in explorations on the waters discharging into this Lake, from Fon du Lac to the Sault, I have had occasion to resort to medicine among my party but once.

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Most of the time we were living in the woods like Indians, exposed to every influence of the climate, as completely as so many wild beasts.

These are the principal points which occur to me, relating to the occupation of this country for agricultural purposes.

EAGLE HARBOR, May 22, 1854.

IRON IN THE UPPER PENINSULA OF MICHIGAN.

BY CHARLES A. TROWBRIDGE, OF DETROIT.

There is probably no part of the American Continent which can boast of as pure Iron ore, in as great quantities, *entirely above the surface of the earth*, (the amount below the surface never having been ascertained,) as the State of Michigan.

With regard to its purity, we quote a letter addressed to "Edward K. Collins, Esq.," by "James R. Chilton, M. D.," of New York City, in which Dr. Chilton says: "I give below the analysis of four samples of Iron ore, which I took from boxes opened in my presence at your office in Wall-street, each box being marked in accordance with the sample. The result is as follows:

"COLLINS IRON COMPANY'S" IRON HILL, ON SEC. NO. 2.

Per Oxide of Iron,	92 26-100, equal to 64 58-100 Metallic Iron.
Silicia,	5 15-100.
Alumina,	1 71-100.
Manganise—None.	
Water and Loss,	88-100.
Making	100 00 parts.

MESSRS. TROWBRIDGE & GRAVERAT'S IRON HILL, SEC. NO 10.

Per Oxide of Iron,	94 37-100, equal to 66 06-100 Metallic Iron.
Silicia,	3 11-100.
Alumina,	1 44-100.
Manganise,	16-100.
Water and Loss,	92-100.
Making	100 00 parts.

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"JACKSON IRON COMPANY'S" IRON HILL, ON SEC. NO. 1.

Per Oxide of Iron,	95 60-100,	equal to 66 92-100 Metallic Iron.
Silicia,	1 71-100.	
Alumina,	1 54-100.	
Lime and Manganise,	43-100.	
Water and Loss,	72-100.	
Making,	100 00 parts.	

CRYSTALINE ORE FROM MESSRS. TROWBRIDGE & GRAVERAT'S IRON HILL, ON SEC. NO. 10.

Per Oxide of Iron,	98 79-100,	equal to 69 15-100 Metallic Iron.
Silicia,	46-100.	
Alumina,	13-100.	
Water and Loss,	62-100.	
Making	100 00 parts.	

"Each of the above samples was tested for *Phosphorus and Sulphur*, but without detecting any; therefore, I know of no reason why these ores should not yield Iron of the very best quality, by the simplest mode of reduction. Respectfully submitted,

[SIGNED.] JAMES R. CHILTON."

We will here remark, that the boxes of ore mentioned by Dr. Chilton, were taken from the *top* of the Iron Hills mentioned, by Mr. Collins, in the summer of 1853. And the verbal opinion expressed by the Doctor, at the time he made the analysis, was, "that the ore must increase in richness as you descend towards the base of the Hill."

As these "Iron Hills" are from 150 to 300 feet in heighth, and one solid mass of "Iron," there can be but little doubt, but that at a depth of 100 feet from the surface, the ore must yield nearly 80 per centum Metalic Iron.

Some of the "Hills" above mentioned, are 80 rods in length, by 40 rods in width, containing millions upon millions of tons of this very rich ore.

As regards the quality and strength of the Iron made from this ore, we quote from the report of Major Wade, of the United States Ordnance Department, made to the Secretary of War, Senate Documents, Special Session, March, 1851, page 80:

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STRENGTH OF POUNDS PER SQUARE INCH.

Iron from	Salisbury, Conn., by mean of 40 trials,	58.009
"	Sweden, 4 trials,	58.184
"	Centre county, Pa., 15 trials,	58.400
"	Lancaster " " 2 "	58.661
"	McIntyre, Essex county, N. J., 4 trials,	58.912
"	England Cable Bolt, E. V., 5 trials,	59.105
"	Russia, 5 trials,	76.069
"	Carp River, Lake Superior,	89.582

By the above data it will be seen that the Lake Superior Iron sustained a pressure of 13.513 pounds more to the square inch than Russia Iron, which was found to sustain 16.694 more per square inch than English cable bolt, which is known to be the strongest iron England makes; thereby showing the Lake Superior Iron to be about 54 per cent stronger than the best English cable bolt.

This Iron has been so thoroughly proven in New York, Boston, Pittsburg, Cincinnati, and at the United States Navy Yards within the past five years, by manufacturing it into car axles, boiler plate, steam engines, wire, tacks, nails, (the cut nail being found to clinch as well as the ordinary wrought nails,) and the manufacture of steel, that a volume could, if necessary, be written to show its great strength and tenacity. All that is now wanted, is a sufficiency of capital to transport the ore to market, or manufacture the Iron with charcoal, in the immediate vicinity of the "Hills," where there is a superabundance of the best water power in the State; and we can see no reason why Michigan cannot supply her sister States with this superior Iron at a lower price than any other iron can be produced in this country.

"Bloom Iron" can be made with charcoal in Marquette county, by water power, and placed on board vessel at the low price of $26 50 per ton of 2240 pounds; and the same Iron can be sold in New York for $100 per ton for the various purposes we have enumerated.

The ore being *above* the surface, its value can be as easily ascertained as the value of a pine tree in the forest; and investments of capital in this business do not run that hazard they necessarily must run in searching for copper and other materials *below* the surface.

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We consider that a trip to the Iron Hills of Lake Superior will more than pay any one, if he does nothing more than take a hasty survey of that immense mineral deposit, without investing a farthing in the various adventures to make them productive.

Detroit, June, 1854.

IRON MAKING IN DETROIT.

BY S. H. KIMBALL.

[Prepared originally for the Detroit Free Press.]

The question is frequently asked, can we make iron successfully in Detroit? The writer has been frequently interrogated upon this subject, and proposes to submit a few considerations upon the question, which may be found valuable, to some extent, to the city. It is evident that before engaging in the manufacture of iron, here or elsewhere, the manufacturer must be able to demonstrate to his own satisfaction, at least, that the material to be wrought, and the fuel and labor to be employed in the work, can be obtained by him in successful competition with all rivals within the range of his market.

There are other considerations of minor importance, which, of course, a prudent man would not omit to notice,—such as the cost of machinery, real estate, access to markets at all seasons, and the like—but these it is not proposed at present to consider. To state the question as it really exists—can the iron ores of the Upper Peninsula be made into pig metal, in or near this city, profitable? and if so, can the manufacture be continued into wrought iron with like success?

The pig metal consumed in this and contiguous markets is of various quality. Part of it is wrought with mineral coal, and part with charcoal—the latter being deemed superior in quality for many purposes, and bearing a better price in the market, corresponding with its better quality. It is undoubtedly true that the ores from the north portion of this State can be for all time, delivered here, as well as labor furnished, as cheaply as at any other point with equal facilities for market, though no substantial advantage in either of these particulars can be reasonably claimed. So far as fuel is concerned, although it is well known that there is mineral coal in the interior of the State, no business should be

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based upon its use, or considered in connection with it, until its quality and price, in this market, are both satisfactorily settled. But the immense quantity of timber, of good quality for charcoal, within reach of the city—the means of access to these forests in almost all directions by plank roads, and the level surface of the surrounding country—it is believed, afford facilities for long, abundant, and cheap supply of charcoal, which it would be difficult to rival. It will be seen, however, that it is only necessary to establish, that pig iron of this variety can be made here as cheaply as elsewhere, to render the business a perfectly safe one.

The writer believes it to be true that there are, at least, one hundred and fifty square miles of heavy timber, within reach of blast furnaces, which might be constructed on the Detroit river, and which would yield of coal timber, eighty cords to the acre. This, computing forty bushels of coal to the cord of wood, would furnish fuel for the manufacture of over two millions of tons of pig metal, at one hundred and fifty bushels to the ton. Estimating one-half of this amount, and the abundance of fuel for practical use, is just as satisfactory. The general quality of the wood in our forests has been stated as good for coal. The value of wood for this purpose is measured by its weight; and in order to show the relative value of several kinds, more or less prevalent in the vicinity of the city, the following table, taken from a valuable work upon the subject, is submitted: Water, 1,000:

	Green.	Air Dried.	Kiln Dried.
White Oak	1.0754	0.7075	0.6630
Red Oak	1.0494	0.6777	0.6630
Sugar Maple	0.9036	0.6440	0.6137
Beech	0.9822	0.5907	0.5788
Birch	0.9012	0.6274	0.5699
Poplar	0.9859	0.4873	0.4464
Red Pine	0.9121	0.5502	0.4205
White Pine	0.8699	0.4716	0.3838

The last column shows the real value of the wood. The water has been expelled. Its weight is in proportion to its amount of carbon, hydrogen, and oxygen—the two former constituting fuel. It will therefore appear, that one cord by measure, of sugar maple, is worth nearly as much as two cords of white pine, and that white oak (if of the quality used in the above experiment) is worth a shade more than maple.

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It is, however, an established fact that the weight of the same kind of timber varies in different soils, though not very essentially.

The ores of this State have been tested elsewhere in a blast furnace, and the following may be relied upon as the true result. The furnace was charged as follows:

	lbs.
To Lake Superior ore, (raw, as taken from the mine,)	400
Bituminous coal, (raw, as taken from the mine,)	500
Limestone,	80
Furnace cinder,	70

Under this treatment, upwards of 20 tons of pig was made, and the yield was seventy-eight and a half per cent. of metal upon the weight of ore put into the furnace. It is not pretended that the above are the proper amounts of ore, fuel, &c.; on the contrary, it was ascertained that the proportions of coal and lime-stone were too large. The experiment is given as it actually occurred. The production of metal was rapid and of excellent quality for its variety. The manager of the furnace stated to the writer that with the Lake Superior ore, the daily production of the furnace, with the same fuel and labor, was nearly double what it was when using their own ore, (Mercer county, Pa.,) and the metal greatly superior.

So far as the manufacture of charcoal pig iron is concerned, it is quite clear that it can be produced here at as small cost as at any other place in the country, and in the abundance of timber for fuel, this State is without a rival. The incidental advantages to the city and State, arising from the establishment of works of this kind, it would be difficult to estimate. But can money be made in the business? This is the question of questions. But is it not already answered? Do not the people and corporations of this State pay a huge sum for simple profits on pig metal every year? and do they not, in addition, pay freights, charges and insurance? This paper, however, exhibits a much more direct and convincing fact to the superficial observer, bearing upon the affirmative. A blast furnace, the metal from which is partly sold in this market, at a profit, is here shown to have produced nearly 100 per cent. greater quantity of metal, with the same labor and fuel, from the ore obtained in this State, than it was able to do from its own. But the true inquiry for the manufacturer is—are my facilities such that I

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can produce the article, as good in quality, and at as low cost, at the place of sale, as any competitor? If he can see the affirmative, then with the same prudence, industry and care, he will lose money only when his competitors do, and not before.

The other branches of the original inquiry, namely, the making of pig metal with mineral coal, and the manufacture of wrought iron in the rolling mill, each involving the consumption of large masses of mineral coal, are of a different nature. Their consideration for the present is deferred. The openings of the coal fields of this State, combined with other causes, may cheapen the cost of this fuel in the city.

EXPOSITION RELATING TO THE COAL FIELDS OF MICHIGAN.

BY R. R. LANSING, DETROIT.

The first inquiry I propose to make relates to the extent of the coal fields of the State.

From the GEOLOGICAL REPORTS of the late Doct. Houghton, (State Geologist,) to the Legislature, Feb. 4th, 1839, I make the following extracts:

COAL.

"We have been enabled during the past year considerably to extend the small amount of information before transmitted to you, respecting the coal beds of our State; and although, from the limited extent of the minute examinations in the coal district, I am still unable to place the subject before you in such a manner as could be wished; its great importance would nevertheless seem to call for an allusion, at least, to such additional information as has been obtained. By reference to the report of C. C. Douglass, Assistant Geologist, hereto appended, on the subject of the minute surveys of Eaton and Ingham counties, it will be seen that the main bed of coal which traverses the central counties of the State, has been traced northerly to within a few miles of the south line of Shiawassee county, and that the bed has been found of sufficient thickness to admit of being profitably worked.

"The line of coal has also been traced southwesterly into Jackson county, where the bed is of sufficient thickness to admit of being worked,

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and the coal is of a quality well fitted for all the purposes to which that substance is usually applied.

"Two miles in a southeasterly direction from the village of Barry, Jackson county, some explorations have been made, and an amount estimated at about 1500 bushels of coal raised. This coal has been applied to use in blacksmith shops of that vicinity, and is mostly of good quality, although it is occasionally somewhat injured by the presence of iron pyrites. For the reason that the out-crop of this bed is nearly on a level with the water of Sandstone Creek, the persons engaged in the work were unable to sink completely through the coal; it was however penetrated at one point, to a depth of about three feet.

"The coal is highly bituminous, a character in common with all that has been found in the State."

I will here remark, that in a conversation with Doctor Houghton in 1844, he informed me that this southern out-crop of the coal bed could not be relied on, for the reason that that locality gave evidence of a disruption, that must have thrown the coal stratum into derangement, separating it from the main coal basin. This has since proved true. At the same time he said no such evidence was exhibited in the region of the out-crops of the same stratum of coal at Cedar and Shiawassee rivers.

In this report Doctor Houghton refers to the report to him of his Assistant Geologist, C. C. Douglass. I therefore make the following extracts from the report of Mr. Douglass:

"The whole rock formation of Ingham and Eaton counties may be referred to the coal bearing series, and several beds of this material, which may be looked upon as valuable, have been examined. The level and unbroken character of the country which brings the rocks but rarely to the surface, together with the disintegrating nature of the rock, (the latter serving to cover those edges which under other circumstances would be exposed,) render it difficult to follow these beds in a continuous manner, but no doubt can be entertained that they exist over a large area of these counties.

"The most extensive beds of coal were noticed in township 4 north, range 1 and 2 east, in Ingham county, and range 3 and 4 west, in Eaton county.

"A bed of bituminous coal more than two feet thick, of a superior quality, in town 4 north, range 2 east, occurs in the bed and banks of

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Cedar River, Ingham county. It was traced along the stream for near half a mile, when in consequence of its dipping below the stream, I was unable to trace it further. This coal is overlayed by a broken down sandstone and fissile shale, varying in thickness from 5 to 10 feet. I was enabled to remove several bushels of coal, which proved to be bituminous and of an excellent quality, containing but very slight traces of iron pyrites. It is compact, has a glossy lustre, ignites easily, burns with a light flame, and leaves only a small quantity of earthy residue."

It is at this point where I have made the excavations hereinafter mentioned.

In *Doctor Houghton's Geological Report* to the Legislature of 1840, he again refers to the report of that year to him of his Assistant, C. C. Douglass, from which are taken the following extracts. After commenting on the "range and extent of the coal bearing rocks," he says:

"On the east the group of rocks appears in the towns of Leoni and West Portage, in Jackson county, and in the northeast corner town of Ingham county, in the bed of the Red Cedar River.

"Its boundary is known to stretch northeasterly across the Shiawassee and Flint Rivers, thus bringing within the limits of the coal rocks, parts of Genesee, Shiawassee, Ingham, Jackson, Calhoun, Barry, and Kent counties, and probably the whole of Eaton, Ionia, and Clinton counties.

"INGHAM COUNTY.

In the northeast corner town of this county, the coal crops out in the banks and bed of the Red Cedar River.

"After penetrating to the depth of more than two and a half feet, I was compelled, for the want of suitable instruments, to abandon further investigation, without having ascertained its full thickness. The coal at this point is very accessible, and must ere long prove of great importance."

In his Geological Report for 1841, Doct. Houghton refers to the report of Assistant Geologist, Bela Hubbard, from which I make the following extracts:

"COAL MEASURES.

The rocks which include the coal beds of our State are embraced within the counties of Jackson, Calhoun, Ingham, Eaton, Kent, Ionia, Clin-

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ton, Shiawassee, and Genesee. They consist of sandstone, shale coal, and limestone. Covered, as these rocks are, with thick deposits of diluviums and clays, they make out crops at but few points, and the determination of their order and extent has been a matter of no small difficulty.

"COAL OF INGHAM COUNTY.

Passing down the easterly side of the basin, the coal is again met with in the northeast corner town of Ingham county. The coal has here been penetrated two and a half feet, but the entire thickness of the bed has not been determined. It may here be observed that the coal of this lower bed, universally, has more than usual compactness and purity, and is equal to the best bituminous coal of Pennsylvania.

"COAL OF SHIAWASSEE COUNTY.

The coal again makes its appearance at the border of the basin near the county seat of Shiawassee county, and it crops out between thick and extensive layers of sandstone in the banks of the small creek entering Shiawassee River. The coal has here a thickness of from three and a half to four feet, and is accompanied by shale, the entire thickness of which is not ascertained."

From these extracts, it will be seen that the coal bearing rocks extend through nine counties of the State, and probably more, a distance of nearly 100 miles, and that the same stratum of coal belonging to the lower coal basin, is exhibited to view at three different points of out crop, viz: at Barry, in Jackson county; at Red Cedar River, in Ingham county, 35 miles from Barry; and at Shiawassee River, 25 miles from Red Cedar River, occupying a line of at least 60 miles in extent, thus affording conclusive evidence of a continuous stratum of coal for that whole distance. The thickness of this stratum is found to be nearly the same at each of these three out crops. The quality of the coal at Shiawassee and Red Cedar Rivers, I know from personal inspection, to be identical; that at Barry, from the Geological reports, seems to be of the same quality. I cannot speak of this out crop from personal inspection, for I have not seen it.

In 1844, I sunk a shaft at Red Cedar River through the coal bed, which at that point lies about seven feet below the surface. I found it to be two feet nine inches thick, overlaid by a stratum of fire clay, and resting on a bed of sand stone. This coal bed is defined by the Geo-

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logical Reports heretofore referred to, as belonging to the lower coal basin, having a superincumbent mass at the centre of the basin of at least 300 feet. The sand rock on which this coal stratum rests, is estimated by Mr. Hubbard's report of 1841, to be of an "aggregate thickness of upwards of 300 feet." He further says in reference to it, "though here classed as beneath the coal rocks, these sandstones are associated with that series of rocks which are usually regarded as belonging to the carboniferous era."

On consultation with Doctor Houghton, in 1845, and by his advice, I decided on penetrating this rock directly below the shaft which had been sunk through the coal bed. I accordingly prepared the nesessary apparatus, and perforated the rock about 30 feet, passing through one coal stratum of about 11 inches, and another of 3 inches. For the want of suitable implements, and the impossibility of getting them made in that then sequestered region, I was forced to suspend further drilling into the rock, and it has not since been renewed.

In 1850, I caused another shaft to be sunk, and the actual measurement of the thickness of the coal bed at that point, was reported to me to be 2 70-100 feet.

In 1853, I first visited the out crop of the upper coal strata, at a place called Grand Ledge, on the Grand River, in Eaton County. Here I found the beds of coal imbedded in sandstone, about 12 feet apart, and neither of them over 20 inches thick. The coal is of coarse quality, and probably from its coarseness, and the thinness of the strata, it will not justify the expense of mining. Subsequently, in the same year, I visited the out crop of the lower bed on Shiawassee River, and sunk six shafts, at different points, through it. I found the coal bed so near the surface, that from atmospheric action or other causes, the coal, which is about three feet thick, has been impoverished; so that all the coal, except about fifteen inches at the bottom, has been converted into bituminous shale. The remaining portion is of great purity, with the exception of a slight intermixture of iron pyrites. This coal bed, to an extent of some 40 acres, appears to be on one uniform level, and can never be available for profitable mining, until the dip into the bowels of the earth shall have been found, as the expense of excavating the surface earth will doubtless be equal to the value of the coal.

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I then passed to Red Cedar River, where I removed from the coal bed by excavating the overlaying gravel and clay, and laying bare the coal bed to the extent of upwards of a thousand superficial square feet, and following the dip, which I found to be some 8 or 10 feet in 100 feet, until I had reached a depth of about 15 feet below the surface. I found the coal stratum to vary in thickness, from 3 feet to 28 inches, The coal from this area, on being removed to the surface, amounting to upwards of 50 tons, was found to be very pure, but as is usually the case with surface coal, was not compact, but easily broken up into small parcels, and in a state readily shoveled up without blasting. I found the coal bed overlaid by a very compact stratum of clay of about four feet thick, and increasing in compactness and thickness in its descent along the dip of the coal. This clay, as is uniformly the case, when found in contiguity with coal in place, is of the description called fire clay. The rock on which the coal rests, furnishes a good material for building purposes, and must justify its being quarried, for the reason that none but scattered surface stone has been found in any direction within 15 miles of this locality. It follows, that in the process of subterranean mining of the coal, if drifts are sent in along the coal bed of 6 to 10 feet in height, there will be no waste in rubbish, for the whole mass of excavation will be *coal*, *rock* and *clay*, each worth the cost of excavation.

It is essential, in order to obtain coal of approved quality, that the dip of the coal bed should be followed down until it is removed beyond atmospheric action, and the coal pressed down into a compact state, by the weight of heavy superincumbent masses.

It may be assumed that all the coal of the lower coal basin, is below the water line, thus involving, in the process of mining, artificial or steam power, for the purpose of pumping up the water and running up the coal cars. The discovery, therefore, of the out crop and dip of the coal stratum, is much more essential than a General Geological knowledge of the existence of a coal region.

In addition to the evidence in the foregoing pages, of the coal fields of this State, I may refer to the accomplished Geologist, Hitchcock, who in a recent outline of the Geology of the Globe, assigns to the State of Michigan, a coal field of 12,000 square miles.

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Having now shown from the reports of Geologists, and partly from personal explorations, the existence of extensive "coal measures" in the State of Michigan, and of at least one available stratum of coal, I now proceed to the next important inquiry, viz:

THE QUALITY OF THE COAL.

Some 14 tons of the coal were transported to this city, to be subjected to all the tests for the various purposes for which bituminous coal is generally used.

Six tons were sent to Messrs. S. & E. B. Ward; another parcel of 6 tons was deposited in the yard of the Central Railroad depot; a load was sent to Messrs. Dibble & Son, for their private gas works, and another load for chemical experiment, to Dr. Adrian R. Terry. This latter gentleman, by means of the weight of his professional cares, has not had time to make a satisfactory analysis of the coal. The following letters and statements will show the result of the several tests:

SMITH WORK.

DETROIT, Nov. 26, 1853.

J. W. BROOKS—*Sir:*—In pursuance of your instructions, I have caused the relative value of the Blossburg and Michigan Coal for smith work, to be tested.

Two forges were supplied with coal by weight, and both were strictly employed at the same kind of work, and during a trial of ten and a half days.

The result exhibits a consumption of 808 lbs. of Blossburg, and 1200 lbs. of Michigan coal, and shows a difference of about one-third in favor of the Blossburg coal. The Michigan coal is free from sulphur, and if its durability is improved to a par with the Blossburg, by a further penetration into the mine, (that which we have used being alleged to be surface coal,) I see no reason why it should not be as valuable for blacksmithing purposes as the Blossburg, with the exception that the present quality of Michigan coal, by means of its brisk burning, emits more smoke than the other, a fault which will doubtless cease to exist when it improves in strength and durability.

The trial of the relative value of the Blossburg and Michigan coal was made as follows:

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One forge was worked five days with Blossburg coal, and consumed 404 lbs., and then five days with Michigan coal, and consumed 600 lbs.

Another forge was worked five and a half days with Blossburg coal, consuming 406 lbs., and then five and a half days with Michigan coal, consuming 600 lbs. In all, 808 lbs. Blossburg, and 1200 lbs. of Michigan. Yours, &c., S. H. NEWHALL.

FOR STEAM.

DETROIT, January 16, 1854.

R. R. LANSING—*Sir:*—The six tons of Michigan coal you sent us for testing its power to raise steam, has been tried on board the Pearl, Captain Goodsell, first on a trip to Malden—Mr. Smith, our Chief Engineer, being on board—and next on a trip to Port Huron.

Their report to us is that the coal burned freely, emitting a great deal of flame, and raising steam rapidly; was reduced to ashes without exhibiting any evidence of sulphur, or leaving any slag or clinker, or making any impression on the grates of the furnaces, which, after the experiment, were left as free from any adhesive matter as if wood had been burned. Wood had uniformly been burned in the furnaces, and therefore any injury to the grates could be readily detected.

Respectfully yours, E. B. WARD.

FOR ILLUMINATING GAS.

BIDDLE HOUSE, DETROIT, January 16, 1854.

COL. R. R. LANSING—*Dear Sir:*—Some time since you favored me with a sample of Michigan coal, for the purpose of testing its gaseous qualities. My gas apparatus being on a small scale, is perhaps as well calculated for making such a test as any other, because an immediate result can be very readily produced. My decided opinion is, that your coal yields as much gas as any other domestic coal used for that purpose, and its luminous qualities certainly exceed any other gas manufactured by us. Respectfully, &c., ORVILLE B. DIBBLE.

FOR COKE.

DETROIT, January 23, 1854.

The circumstances in which I have been placed, during many years of my life, have been such as to warrant me in giving an opinion with regard to coke. I have seen some hundreds, or I might say some

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thousands of furnaces, in daily operation, for the purpose of making coke, for years, in the north of England, and I feel no hesitation in saying that the coal known as "Michigan Coal," will make almost, or altogether as good coke as any I have seen. Some portions of this coal were given to me by R. R. Lansing, Esq., with a request that I would make some experiments upon them, in order to test the quality of the coke yielded. I did so, as well as the imperfect instruments with which I had to work, would allow me, and the conclusion I have come to is entirely favorable to the coal, as being good for the making of coke.

Since making those experiments, I have seen a gas retort charged with this coal three several times, and the coke yielded in these instances, was, throughout, of that uniform silvery appearance, which is an invariable feature in good coke.

My impression therefore is, that this coal with proper ovens, would make about as good coke as that now used in England, in firing locomotives and blast furnaces. FRANCIS SMITH.

FOR DOMESTIC USE.

DETROIT, Feb. 17, 1854.

R. R. LANSING, Esq.—In answer to your note of this date, requesting my opinion in regard to the quality of the load of Michigan Coal I had from you some weeks since, it gives me great pleasure to reply, that I have been burning it in an open grate, for the last four weeks, and I have never, in the western country, burnt a coal which gave so clear and brilliant a flame, and of which the coke, (after the bitumen was burned out,) made so permanent and hot a fire. It leaves but an insignificant amount of ashes or earthy residuum, in comparison with any coal I have ever burned in this region. The coal I had from you was too much broken to exhibit its full value as a fuel for household use.

Very truly yours, ADRIAN R. TERRY, M. D.

The next inquiry is as to the

DEMAND FOR MICHIGAN COAL.

The consumption in the city of Detroit during 1853, of coal, of all descriptions, for all uses, steamboats, manufacturing purposes, gas, furnaces, and domestic use, amounted to about 90,000 tons.

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On pursuing the inquiry for demand in the interior of this State, and particularly in the State of Illinois, I learn, a material amount of this coal will be needed for blacksmithing purposes in this State, and a much larger amount, when converted into coke, will be consumed in the various blast furnaces scattered over this State, instead of the anthracite coal of Pennsylvania, which is generally used, and only obtained at great expense.

The great number of railroads, constantly increasing, and the enormous quantity of wood annually consumed by their locomotives, must force the railroad companies, by the increasing cost of wood, to substitute coke in its place.

It is estimated by the late State Topographer, that the number of "the Peninsular Lakes is not less than 3,000, being in proportion of one acre of water to every 39 of dry land."

"Another striking feature in the Peninsular landscape, is the number and extent of wet prairies or marsh. Of these, the proportion is much larger than the Lakes, and they often cover many miles of surface." To these may be added, the well known facts, that a much larger proportion of the Peninsula is occupied by sparsely timbered oak openings, and dry prairies. In some of the populous parts of this State, the want of wood is already beginning to be felt; and the time is near at hand when the want of wood, for fuel, in a region so destitute of wood-land, must be forcibly realized. Besides home consumption, the western portion of the Peninsula is beginning to be drained to supply the wants of the immense prairie regions on the west side of Lake Michigan.

It has recently been stated in the public journals, that the consumption of wood by the locomotives on the Michigan Central and Southern roads, between Chicago and Niles and South Bend, is estimated at 80,000 cords, within the past year; that the Rock Island and some other Illinois roads, are dependant on Michigan and Indiana for wood, and get it by running their wood trains over the Michigan roads, and that the present prices of wood in Chicago are, Hickory, $5 50 to $7 00; Beach and Maple, $5 50 to $6 00; Oak, $4 50 to $5 00 per cord.

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The Chicago Democratic Press, of the 4th of February, 1854, states that there are now ten trunk with three branch and extension roads, amounting to 1,621 miles of road, running into Chicago—that by the 1st of December, 1854, there will be 2,974 miles of road, and by the 1st of July, 1855, 3,715 miles, and that by the 1st of May, 1855, there will be 92 trains a day over those roads. How is it possible, that a prairie State on the one side of Chicago, and Michigan, a sparsely timbered State on the other, can, at saving prices, supply all those trains with wood for their locomotives? It seems to be inevitable that coke must be substituted in the place of wood, as in England and the most of Europe.

No invention has yet been made by which bituminous coal can be used for locomotives, without being first converted into coke. There are coal fields in Illinois and Missouri, but will that quality of coal furnish coke? In answer to this inquiry, I may state as a general rule, that coal, from which luminous gas cannot be made, will not make good coke, and such, I have been informed, is the character of the Illinois and Missouri coal. In further evidence of that fact, I annex a slip from one of the public papers of January, 1854:

"DARKNESS IN PROSPECT.

The St. Louis Republican of the 24th, says the supply of Pittsburg coal at the gas works of that city, is nearly exhausted, and that unless the ice breaks up in a few days so as to admit of cargoes coming up the river, the manufacture of gas will stop, and the city will be left in darkness—Illinois and Missouri coal will not answer."

In addition to which, I subjoin extracts from two letters from Chicago:

E. Willard Smith, Engineer of Chicago Water Works, to R. R. Lansing, Feb. 24, 1854:

"Very little Illinois coal is brought here for sale. It is a very poor article, half slate and sulphur, and brings about one-third as much as Erie coal. Erie coal is sold here at $5 to $5 50 per ton, in summer, and has been as high as $9 and $10 this winter, and always is higher in winter. Wood must go out of use here."

H. Seymour Lansing, of Chicago, to R. R. Lansing, February 27th, 1854:

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"The coal (Illinois) sent to this market is from the surface, and is highly impregnated with sulphur, and for the last year has not been much used. It slacks after exposure to the air. It is not used for making gas, here or anywhere else, the Ohio and Erie coals taking the preference. As to coke, there is some of it manufactured in the south-western part of the State, for St. Louis, but it seems to me that coal with less sulphur must make better coke. The railroads will soon create a demand for coke. On the first of July, 124 trains a day will come in and go out of Chicago—62 each way."

TRANSPORTATION OF COAL.

The transportation of coal to market, is the next inquiry.

In the first place, I would state that it is proposed in forming a coal company, not to locate its operations at any given point, but to embrace for its sphere of action several counties within the coal limits, and thus secure to the company in its articles of incorporation, the right to mine coal in any one or more of the counties so named, at any one or more points where satisfactory coal lands shall be obtained, on or near the cheapest line of present railway transportation. The route of the Oakland and Ottawa railroad, now in procees of construction, passes over the coal basin, but at no point nearer to the Red Cedar River coal mine than twenty miles, which point on that railroad is about fifteen miles westerly of Fentonville, making the whole distance by such route, as follows:

From the mine to the Oakland and Ottawa road,	20 miles.
From thence to Fentonville,	15 "
Fentonville to Pontiac,	25 "
Pontiac to Detroit,	25 "
Total.	85

This route will require the building of a new railway of twenty miles, from the mine to the Oakland and Ottawa Railroad. But there are other routes which will shorten the distance from the mine to Detroit. The distance from the mine to Fentonville is about thirty miles, and the distance from the mine to the Central Railroad, at Dexter, is also about thirty miles. Fentonville and Dexter being each fifty miles distant from Detroit, the length of either route will be the same.

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The demand for coal or coke will not be confined to Detroit. It is confidently believed that a coal and coke depot at Jackson, on the Central Railroad, to supply the region south and west of that place, would experience a demand quite equal to, if not greater that that at Detroit. This involves an inquiry into the mode of transportation from the mine to Jackson. A plan is proposed to run a railroad from Lansing—the capital of the State—by the way of the mine, to Dexter, a distance of about forty-three miles. It is contemplated to run a railway under a former charter, from Grand Rapids, by the way of Lansing, to Jackson, the survey of which route is now in progress. There is also a great railroad enterprise started at Cincinnati, to run a line of railway from that city, through Hillsdale and Lansing, to the Straits of Mackinac, for which a company has been formed and organized, called the Cincinnati and Mackinac Railroad Company. W. Gunckle is President, and Geo. Y. Wellington, Chief Engineer.

A reconnoisance of the entire line has been made by G. Y. Wellington, a competent and intelligent engineer, and eighty-four miles of the route, in the State of Ohio, are said to be already constructed. A report of more than ordinary ability has been recently published, exhibiting the plans, prospects, advantages and probable profits of the road.

The construction of either of these two last-mentioned railways will afford the means of transporting coal and coke to the Central Railroad at Jackson, whether they are to be drawn from the line of the Oakland and Ottawa Railroad or from the mine at Red Cedar River. From this mine to Lansing, a distance of about 14 miles, the coal and coke, until the road is made from Lansing to Dexter, will have to be conveyed in wagons over a plank road, the mine being situated on the line of the plank road from Detroit to Lansing.

Until the one or the other of the railways between Lansing and Jackson shall be made, the coal and coke must find a market chiefly in Detroit, either over the Oakland and Ottawa Road, or over the plank road by the way of Howell.

I have some reason for suggesting that the mining company, when formed, may secure coal lands for mining operations on or near the line of the Oakland and Ottawa Railroad.

I will now proceed to explain how *the article of coke may be profitably carried over the plank road to Detroit.*

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I have caused several experiments to be made on the fair working powers of the horse. It is well settled by English authorities that the strength of a horse is equal to a strain of 200 lbs., at a working speed of two and a half miles an hour, or, in other words, of raising 200 lbs. This may be more readily appreciated when it is also understood that the strength of *five* men is equal to that of *one* horse—thus establishing the strength of each man at 40 lbs. of power. I employed a competent engineer, (E. Willard Smith, now Engineer of the Chicago Water Works,) to test the force of traction by actual experiment. He reported the result to be as follows:

"I have tried the experiment on the power of traction upon the State Street Bridge, Albany. I had an ordinary dirt wagon loaded with sand; the wagon and load weighed 4,650 lbs. I placed the load on the centre span of the bridge, which is level, then took up a plank of the floor, and over the opening fixed a pulley, over which we passed a rope attached to the wagon, and fastened a weignt of 120 lbs. to the end. This weight kept the load in motion after it was started. According to this result, a force of traction of 100 lbs. will move on a level plank road, 3,650 lbs. English authors state that 100 lbs. will move 1,800 lbs. on a McAdams road. A day or two after this experiment on the bridge, I tried the same experiment on a hard earth road; the result was, 100 lbs. moved 1190 lbs. This makes 100 lbs. on a plank road, move three times as much as on an earth road—but as this earth road was much better than the average of common earth roads, it may be safely stated that the result is, as four on plank roads to one on common roads.

On plank roads, 100 lbs.	move		3,650	lbs.
McAdam do	do	do	1,800	"
Common earth road,		do	1,190	"

I cannot find that either of the experiments have before been tried, and the result is very satisfactory.

Authors say that a horse can exert or draw with a force of 200 lbs., at the rate of two and a half miles per hour; therefore, a pair of horses would draw 7 tons on a level plank road, including weight of wagon. The wagon I used on the bridge was a rough one, and not well greased.

In a subsequent report by the same engineer, he says:

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"I send you the drawing of a coal wagon. * * * I have taken a great deal of pains with the drawing, and consider it a very good one. I have investigated very thoroughly the force of traction, and also the economy of using large wheels. A wagon like the drawing will be very economical for the transportation of coal. * * * We all know that a good team on a good common earth road ought to draw one and a half tons; this multiplied by 4 will give six tons, exclusive of wagon, for a plank road. This result is given on the supposition that both wagons are of the same size; but in the drawing the wheels are 7 feet in diameter, or nearly twice the size of a common wagon wheel. We know as the size of wheels is increased, power is gained; therefore, by the use of wheels of 7 feet diameter, a span of horses ought to draw nearly 12 tons, all of the wheels being of the same size. This wagon will weigh about one and a half tons. * * As the front wheels (all the wheels being of the same diameter) are so large, the wagon will require a large space to turn in; but this is no objection, as it will not be necessary to turn the wagon except at the ends of the road, where there will be ample room, and the wagon can be turned sufficiently to pass teams on the road back to the mine."

It will be seen that Mr. Smith's experiments have been made on level surfaces. Allowance must of course be made for the undulations of plank roads. The plank road from Detroit to Lansing is so graded that no inclined plane of the road exceeds four feet to one hundred feet. Over such roads it is practicable for a pair of horses to draw a load, in a common wagon, of four tons, exclusive of the weight of the wagon, at a working speed of two and a half miles per hour. This has been found to be a practical load on such plank road grades, both in Canada and the State of New York. It is beginning to be practiced in this State, where the construction of the common wagon is of sufficient strength to bear the load. It is therefore certainly safe to assume that a larger load can be drawn by the force of two horses over plank roads so graded, on a wagon constructed for the purpose, with the greatly increased power afforded by wheels of seven feet diameter and anti-friction axles. But I have based the subjoined estimate upon a load of only four tons, on the improved wagon. The Cedar River Mine is distant 70 miles from Detroit, by the plank road. It is not claimed that coal, in loads of four tons, on an estimate of its value at $3 per ton in Detroit, can

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be so transported at a profit, but it is confidently assumed that coal converted into coke, by which process its weight is reduced one-half without diminution of bulk, can be transported at a great profit. The subjoined estimate is also based on the allowance of 300 working days for teams, per year—five days for each team to make a trip to and from Detroit, and 60 trips a year. It is also assumed that half a ton of coke of a quality to be used for the various purposes for which it is profitable to substitute it, in the place of other fuel, is worth not less than twelve and a half cents per bushel at Detroit, and as a general rule, one ton of coal will produce 30 bushels of coke.

In addition to what I have before said of the probable demand for coke, I will here introduce a paragraph from one of the public papers, of recent date. It is as follows:

"We see it stated that within the last year 300,000 tons of coal were transported from Philadelphia to Lake Erie, *via* Albany and Buffalo."

This of course must have been anthracite coal, sent up to supply the demand for blast furnaces chiefly. This inference is palpable, because the cost would not justify its use for any other than manufacturing purposes, and because no other coal comes from Philadelphia, and there is an abundant supply of bituminous coal on Lake Erie, at Erie and Cleveland. It is conclusive of another fact, that such bituminous coal will not produce coke of a quality to be substituted in the place of anthracite coal. The bituminous coal of Michigan produces coke quite equal in quality to the best coke used in blast furnaces and locomotives in England.

To exhibit the increasing importance and consumption of coke, I subjoin extracts from a recent able work on the subject of a portion of the Collieries of England, by Matthias Dunn, Government Mine Inspector, for Durham, Northumberland, Cumberland and Scotland:

"Of late years a new and important trade has been opened for the small coal, in the formation of coke, for the use of locomotive engines, iron works, breweries, &c., at home, as well as for general consumption abroad. Indeed, so rapid and important has been the increase of this trade that some collieries have erected an apparatus for crushing their large coal into small, the further to effect the production of coke. Of course the erection of coking ovens in that case becomes contingent; and these consist of a succession of domes of various forms, which are

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lined with fire brick, and contain, according to the most approved practice, from six to eight tons of coal each. Influenced by the especial object of consumption, the coke is roasted from 60 to 90 hours, producing, according to the quality of the coal and the duration of burning, from 40 to 55 per cent of coke. The said ovens cost from £30 to £50 each," ($150 to $200.)

In a second edition of the same work, M. Dunn states:

"Since my history of the coal trade appeared in 1844, many and great revolutions have taken place throughout the country, in respect to the demand and supply of coals. In aid of the general trade and the inferior collieries, three great and unforeseen events have occurred, viz: the extension of the steam coal consumption; the immense increase of the consumption of coke and gas; and the general manufacturing consumption.

"The extraordinary increase of the coke trade from the county of Durham deserves especial attention, inasmuch as many large collieries in the Tanfield, Brancepeth and Crook districts, are being worked chiefly for the making of coke for the locomotion, home trade, and foreign consumption; and it is no unusual thing for a single colliery to possess 300 and 400 ovens. The seams of coal in these collieries are of so very soft a nature that they are fit only for the making of coke or the production of gas. * * * *

"From the superior quality and density of the coke made in this part of the country, it forms the grand subject of consumption throughout the greatest part of the kingdom, and even in Yorkshire and Lancashire, where many of the seams are of a pure coking quality."

The thorough chemical analysis and practical experiments made of late years, in England, to test the comparative usefulness of its various coal beds, have been forced upon the collieries by the pressing demand for coke for the use of locomotive engines, iron works, and innovating improvements in her numerous branches of manufacture; and it would seem that even there, where (in the language of the late Professor Johnson, of Philadelphia) "the coal deposits of the small island, which would itself scarcely cover one of the coal fields of the United States, have contributed to the power and influence of one of the most commercial nations of the world, and afforded the chief means of carrying her conquests to the remotest part of the globe," the value and power

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of coke, skillfully made from selected coal beds, have not until recently been fully understood.

I may venture to predict that the time is not far off, when coke, now so extensively used as a propelling power and for manufacturing purposes, will be universally substituted in the place of coal, properly made, for domestic use, on account of its cleanliness, durability and economy.

In England, Scotland, Ireland, and North Wales, (according to M. Dunn's statistical tables,) there are worked—

103 seams of 3 feet coal.
60 " of 2 "
160 " of between 2 and 3 feet.

The following estimate is on the employment of 42 two-horse teams, over the plank road, for the transportation of coke:

Steam engine, pump, and fixings,		$5,000
Stables, sheds, offices, and scales,		2,000
Ten coking ovens at $150,		1,500
		$8,500
Forty-two wagons at $150,	$6,300	
Eighty-four horses at $100,	8,400	
Forty-two sets of harness at $20,	840	
Forty-two pairs storm covers at $4,	168	
		$15,708

ANNUAL EXPENSES.

Wear of 20 per cent. on $15,708,	$3,411	
Rent of coal yard at Detroit,	500	
Salary of Superintendent,	600	
Coal yard agent, at $30 per month,	360	
Four laborers at coal yard, at $20 per month,	960	
Contingency of 10 per cent. on $8,500	850	
		6,411
Hay, 14 lbs. a day for each horse, 215 tons, at $6,		1,290
Oats, 20 quarts " " " 19,167 bushels, at 35c,		6,708
Oil for wagons and harness,	$60	
Curry-combs and whip lashes,	40	
		100
Horse shoeing, $10 per horse,		840
Forty-two wagon-masters, at $20 per month,		10,080

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Tolls on 42 wagons,	$7,056
Two engineers at mines, at $30 per month,	720
Oil for engine, $20 per month,	240
Four hands at mines, at $20 per month,	960
Ten hands at coking ovens, at $20 per month,	2,400
Mining 20,160 tons of coal, at 50c,	10,080
State tax on coal,	101
Total,	$46,986
20,160 tons of coal will yield 604,800 bushels of coke; 604,800 bushels of coke at one shilling, is	75,600
Deduct expenses,	46,986
Net profit,	$28,614

Forty-two teams, making 60 trips each, with loads of 240 bushels, will deliver at Detroit, 604,800 bushels of coke.

An estimate on the same basis, for working 84 teams, exhibits a net profit of $62,376, and a delivery at Detroit of 1,209,600 bushels.

Detroit, March, 1854.

BUSINESS OF DETROIT.

The following article was prepared in March, 1854, for the Detroit Evening Tribune, by one of its editors:

DETROIT—HER INTERESTS AND PROSPECTS.

While it has always been our endeavor to keep our readers informed of the state of trade, of the various business enterprises of the city, together with its growth and progress, as fully and correctly as may be done from day to day, and have thus, perhaps, discharged our whole duty as journalists, yet it is much to be regretted that no full, corrected, and reliable statement of the commercial transactions and leading manufactures of Detroit, has been laid before our business men at home, as well as those abroad, who have interests here, or who may be seeking a field for profitable investment. It is by such statistical statements, and figures only, that we shall be able to mark, with accuracy, the progress of our city in business and wealth, year by year, while

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they will be valuable to the merchant, mechanic, and capitalist, to show the present state and future prospects of the various interests to which they are attached, in order that their plans and estimates may conform therewith. By stating these facts, and showing what we are really doing at this point, the people of other sections will be enabled to correct the false impressions which may have been produced by the sad tales of early travelers, or the interested and unfair comparisons of jealous rivals.

Figures and details alone will reduce to substance the visionary conceptions of the *great west*, which are still entertained by a large portion of the people of our country. Such figures, our neighbors both east and west have been accustomed to put forth, illustrating their growth and prospects, and have received their return in men of energy and perseverance, and in capital seeking a participation in those advantages and profits. This is right, so far as their statements are reliable, and we honor them for their forethought, and the energy with which they prosecute the plan. Let industry and enterprise everywhere, and at all times, receive its just appreciation, and while we award this to others, we also claim it for ourselves.

Detroit, founded long since by a race with little or none of that restless ambition, or "go-ahead" spirit which characterizes the people of our country at this day, has had much difficulty in overcoming this stubborn conservatism of the old land-holders, enough to avail herself of her favorable locality for trade and commerce. Until the last few years she was but a frontier military and trading post; known only to the few who passed over these waters in the exercise of their petty traffic. Situated just midway of a chain of navigable inland seas, two thousand miles in extent, and upon this beautiful Strait, whose pure, deep waters, afford miles of space for docks and safe anchorage, for whole fleets, it is impossible but that a place of business and consequence should spring up here; and we regret to say, that much of its best growth has been forced upon it, by these natural causes, without the assistance, and almost against the efforts of those most interested, and who should have been foremost in the work of improvement. Yielding, however, to the force of the times and circumstances, these barriers are being passed, and we may look to a more active and prosperous future. For excellence and beauty of position, it may challenge

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comparison with any inland city of the Union; while it has, beyond and around it, a country of unsurpassed fertility and productiveness.

Again; it is the commercial metropolis of a State which has, within itself, sources of wealth in its forests of majestic pines, and in its deposits of those valuable metals, iron and copper, unequalled by any in the world, which by the enterprise of our people should be entirely manufactured within our own borders, and tend to the building up of the State, and enriching of those who have chosen it for a home. Whether this shall be so done depends upon our citizens, and time alone will give the answer.

We propose to give a few statements and figures, showing the progress and business of our city for the past year in some departments of trade and industry, not, however, dignifying them with the character of a complete view of the transactions of that period, but more to inform and stimulate our citizens by showing what has been, and may be done, with so little apparent effort.

A few figures will show the rate of increase in population to the present time:

The population in	1810	770
do	1820	2,442
do	1830	2,222
do	1840	9,193
do	1844	10,939
do	1845	13,065
do	1850	21,057
do	1852	26,648
As taken in the summer of	1853,	34,439

This, however, includes only those strictly within the corporate limits, while there is both above and below the present boundaries a space quite equal to either of the city Wards, built up and inhabited by people whose entire occupation and interests are in the city, and who should therefore properly be enumerated with it. Adding these to the number stated above, and we have a population of nearly or quite 40,000. The increase for the year 1853 was about 35 per cent., and from the many large enterprises now setting forward, and the extensive preparations for building, we cannot anticipate at the close of the current year a

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population of less than 50,000 or 55,000. In every direction the city is extending itself beyond its present limits; new streets are being opened, shops, dwellings and stores being erected in districts where both convenience, health and security require the extension of the city laws and police, as well as improvements for drainage, water, paving, &c. It is hoped that the charter may be amended at the earliest possible date, to embrace such sections as are thus situated. The value of property there will be greatly enhanced, and the interests of the city promoted.

The amount of taxable property as returned for the year 1853, was $10,741,115.

Besides this, there is about $3,000,000 belonging to various corporations, which, by commutation with the State, is exempted from municipal taxation.

The total return for 1852, was $3,008,510 in the city, though we should add that this was under a different law from that of the past year.

The number of buildings erected during the year was large, comprising many substantial houses on business streets, but a greater proportion of dwellings than heretofore, many of which are of the most costly and elegant style and finish. Jefferson Avenue, Congress Street, and the section above the Grand Circus, are particularly mentionable in this respect—and the work is but just commenced. The demands of wealth and taste must and will be met in the speedy substitution of modern structures for the many time-worn and rude ones which our city now presents.

For the coming year we anticipate a greater amount of building for business purposes, ware-houses, blocks of stores, mills, founderies, &c., than in any former season. Several fires on the best streets, have prepared the way for improvements, while other locations, favorable to particular purposes, are being secured in all directions. The construction of the extensive works of the Oakland and Ottawa Railroad in the upper part of the city, will add greatly to the value of property in the vicinity as well as to the business of the place generally. Such has been eminently the case with the location of the Central Railroad, and will be wherever capital and labor are concentrated.

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Several costly and elegant churches are in process of erection, which will afford needed accommodations to the citizens, and add much to the beauty of the town.

During the past year several miles of the streets have been paved with stone in the best manner, and main sewers constructed through those portions most in need of such improvements.

The gas works have also been enlarged and extended, to keep pace with the wants of the people.

At the last session of the Legislature, a Board of Water Commissioners was incorporated, who now have charge of this entire matter. They have, during the year, laid about seven miles and a half of Iron pipes, and will proceed forthwith to the erection of a new reservoir on the elevated ground back of the city, equal to the present and prospective necessity.

But, dropping this general course of remark, we will speak of some principal branches of business carried on among us, and their results, for the year past. And first we name the manufacture of Iron as most important to our city, and destined to be, we believe, the greatest. We have a summary of the principal establishments, which gives

Of steam boilers	610 tons.
Castings	3,900 "
Steam engines	97

for which was principally used 600 tons wrought iron, 200 tons of which was Lake Superior iron. This we find is considered far preferable to *any* other for its greater tenacity. In these works were used, also, of

Ohio coal	4,000 tons.
Lehigh coal	1,200 "
Charcoal, about	70,000 bushels.

and other materials needed for the business in proportion, employing several hundred men, and doing an aggregate business of over a half million of dollars. That establishments employing so much labor, and distributing so much money, must contribute greatly to the prosperity of a city, needs no demonstration. The extensive mining and lumber regions of the north do, and will continue to require, all the engines, and other machinery for their purposes, that can be supplied from this point; while our increasing lake marine offers to our engineers a field for com-

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petition with the skill and capital of other cities and States. And here Detroit need have no apprehensions, as the works of past years sufficiently evince the superior skill of her mechanics, sending forth numbers of elegant low pressure engines, without a single failure, while scarcely another lake city ventured the experiment.

We hope soon to see the Iron from the rich Lake Superior deposits, manufactured here at home, into every form for which it is required. The amount even now consumed and sold is near six hundred tons, which would be indefinitely increased if it were within the reach of mechanics. Large quantities of the ore, or rather pure native Iron, have been brought down, but had to pass by us for want of works for its manufacture at this city. A rolling mill prepared for every kind of work, up to the heaviest Railroad Iron, will be a very profitable investment. In this connection, we also notice with pleasure, the preparations for extensive Locomotive Works, and predict that the energy of the corporators will be amply rewarded.

The Copper interests of Detroit and Michigan are too important to be passed unnoticed, but, as we have not full data at hand, we will omit a mention of them for the present, except a single item. In one of the machine shops mentioned above, there were used twenty-five tons of Lake Superior Copper for their brass work, and large quantities in the others.

LUMBER.

This is one of our great staples, and must continue to be such for a long time to come. The forests of pine, covering a large part of our Peninsula, afford lumber of a superior quality, which is becoming noted in all the principal markets. Within a year or two there has been a marked improvement in prices for all grades, both for home consumption and exportation. The manufacture and shipment are mostly carried on along the St. Clair River, Lake Huron, and about Saginaw. There are, however, in the city, ten mills, which cut during the year:

Lumber, ... 32,950,000 feet.
Lath, ... 15,877,600 "

Besides this, there was sold from yards having mills elsewhere, 6,958,886 feet, making a total of Lumber of 39,908,886 feet, worth on an average $13 50 per M., or about $520,000 00
The Lath at $2 per M., ... 31,755 20

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This does not include any of that which arrives daily over the plank roads from the forests of Lapeer county, nearest us, nor the large shipments made by our citizens directly from the pineries, where many of them own and manage mills. We have here given only the single item of Pine handled at Detroit, without naming the Black Walnut, Whitewood, and other valuable kinds of Lumber, which would greatly swell the aggregate of trade given. It should be recollected also that the Pine region approaches within a few miles of the city, so that it distributes only to its immediate vicinity, and the line of the Railroad. During the last year there was much speculation in Pine lands, and all that the most dilligent search could discover, were located with warrants or purchased. Whether this shall result beneficially to the State is at least doubtful. The demand for Lumber at this point far exceeds the supply, and the several yards we find to be almost bare at this time.

Connected with some of our City mills are extensive Planing and Grooving works, in which a large part of their Lumber is still further prepared for building purposes. This would add a considerable per centage to the value as stated above.

GRAIN AND FLOUR.

The produce market opened for the year with low prices, and large quantities in store. The new crop was full, and of excellent quality. Owing to several causes, the price rapidly advanced beyond that of several years past, and transactions during the latter part of the year were very large. The quantity of wheat purchased at this point, was

Bushels,	2,066,624
Flour, barrels,	322,290
Rec'd by Central railroad, in same time, bush.,	1,147,125
Flour, barrels,	406,659

The last, of course, was shipped at Detroit. Within a few years past, there has been a great improvement in Michigan wheat, so that it now ranks with the choicest varieties in all the Eastern markets. In consequence, we find that the greater proportion is purchased by eastern dealers, and shipped in the berry, to be manufactured into "extra Genessee," and other noted brands, while our own millers, taking advantage of the good name of our flour, are sending west, to Illinois and elsewhere, and purchasing an inferior, and cheap article, to mix with that grown in our State, and thus making a greater profit than if only

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using our own superior grain. In the one case, injustice is done by refusing us the credit to which the productions of our State entitle us; and in the other, great injury is, or will be the result of affixing Michigan brands to an inferior article grown elsewhere. The latter course cannot be too much reprobated, and if persisted in, our millers will find that wheat will stand relatively much higher in the market than flour, which would, of course, operate hard upon them.

It is matter of congratulation that abundant crops and good prices have relieved the farming community from embarrassments, which, a few years since, weighed heavily upon them, and prevented the full development of those resources which Nature has placed within their reach.

Having attained this prosperous independence, the intelligent people of our beautiful and fertile Peninsula, will stop at nothing short of the highest excellence in agriculture. Of the coarse grains, very little is raised, except for home consumption; and we find of oats and corn, only about 30,000 bushels. Formerly, almost the only thing deemed worthy of attention was the culture of wheat, but it has been found that equal or greater profits may be derived from wool, consequently much care is now bestowed upon it. We have no accurate data for the year 1853, but estimate the amount purchased here, or arriving by other means, about equal to the receipts by the Central Railroad, which were 900,000 lbs. The average price was a little more than 50 cts. per lb.—considerably above that of years past. The large number of imported sheep, and others arriving, speak well for the enterprise and foresight of the people.

NAVIGATION, SHIPPING, &C.

The season of navigation for this year was unusually long, and the weather for the most part favorable. Our river during the winter of '52-'53 was never obstructed by ice, and access to the western ports of Lake Erie was obtained as early as the 3d of March, and continued until after December 15th, a period of nine months and a half. The numerous breaks and interruptions of the Erie Canal, together with the low price of grain, made the eastward shipments during the early part of the season very light; but as the prices soon advanced, the fall business was much greater than usual, and the aggregate for the year also

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showed a large increase. Many new and direct routes to the great Eastern markets, have just been opened to the growing business of the West, which our merchants find greatly to their profit, both in regard to speed and certainty of transmission. The different lines of propellers passing through the Welland Canal, to Oswego, Cape Vincent and Ogdensburg, do a very large part of our carrying, because they afford conveyance by steam the entire distance to New York and Boston, with but a single transhipment, and saving several days time. This must continue a great freight route, and we continue to be in a manner tributaries to Canada, unless *American* enterprise and capital shall offer a rival route through American soil. It is to be hoped the grand project of the Niagara Ship Canal may be speedily realized. The increasing business of the great West requires it, and will justify the expenditure. Unless this be carried forward, the Welland Canal enlarged, will direct the most profitable part of the trade which has hitherto passed over the long routes of the Empire State.

During the year several Propellers of superior size and construction were sent out from our port, besides a number of fine Steamers and sail craft. The most extensive ship yards belonging to Detroit, are located at Trenton and Newport, where expenses are less, and timber more convenient; consequently most of the hulls are built at those points. The numerous elegant specimens of naval architecture, from the yard of Messrs. Ward, at Newport, need no commendation to the inhabitants of the Lake region. They speak their own praise. Those of Trenton are equal in excellence, but not in number. A splendid addition to the marine of our city will soon be made in the mammoth steamers in construction for the Central Railroad Company.

We have here in Detroit the best facilities for the thorough repair and improvement of vessels of every size and kind, in two Dry Docks, plenty of materials, and the most skillful mechanics of the country. Ives' Dry Dock can receive the largest craft now, or likely to float here, or several smaller ones at once, and with its double engines and other facilities, perform its service with the greatest dispatch. Hyde's Floating Dock will, doubtless, also perform its part, when perfected, to satisfaction.

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We subjoin the names and tonnage of the vessels enrolled at this port at the close of 1853, and now in commission:

STEAMERS.	TONS.
Detroit,	352
Pacific,	462
Southerner,	450
May Flower,	1354
Telegraph,	80
Ocean,	1052
J. D. Morton,	472
Baltimore,	573
Baltic,	825
Arctic,	861
Pearl,	252
Ruby,	252
Swan,	209
Huron,	348
London,	439
Franklin Moore,	192
Cleveland,	574
Traveler,	603
Fashion,	324
Dart,	297
John Owen,	191
Bay City,	479
Despatch,	225
Arrow,	373
May Queen,	688
Romeo,	160
Michigan,	642
Ottawa,	316
T. Whitney,	238
E. K. Collins,	942
Illinois,	927
Traffic,	43
Total tons,	15,948
Steamers,	32

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PROPELLERS.	TONS.
Young America,	559
Delaware,	216
J. W. Brooks,	312
Falcon,	663
Hercules,	255
Northern Michigan,	339
Fintry,	590
Gen. Taylor,	462
Peninsula,	354
Globe,	313
B. F. Bruce,	168
Princeton,	455
Manhattan,	319
Odd Fellow,	104
Stockman,	81
Total tons,	4,450
Propellers,	15

SCHOONERS.	TONS.
L. M. Mason,	340
White Squall,	218
Ontonagon,	211
Fortune,	371
White Cloud,	317
Palo Alto,	202
Niagara,	152
Susan A. Clark,	163
Fame,	341
Oliver H. Perry,	406
Convoy,	236
Nile,	250
Odd Fellow,	275
Henry Clay,	173
Mary,	212
Agnes Barton,	155
Ellen Stuart,	161

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Velocity,	161
Blue Bell,	150
Alvin Clark,	218
Dial,	161
Total tons,	4,873
Schooners,	21

BRIGS.	TONS.
James McBride,	271
Boston,	167
Caroline,	257
Mt. Vernon,	—
Pilgrim,	242
Roscius,	318
Iroquois,	256
Orleans,	173
Cortlandt,	234
Columbia,	176
Ellen Parker,	332
Philadelphia,	122
Total tons,	2,548
Brigs,	12

BARQUES.	TONS.
Ocean Wave,	308
Nucleus,	329
E. B. Morgan,	310
Total tons,	947
Barques,	3
Total number of vessels,	83
Total Tonnage,	28,766

The following is a list of the vessels wintering at the port of Detroit:

STEAMERS.

Garden City, Argo, Arctic, Romeo, Telegraph, Michigan, Despatch, Dart, Ocean, T. Whitney, Mohawk, May Flower, U. S. Survey, Pearl,

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Illinois, John Owen, United, Morton, Albion, Cleveland, Swan, Minnesota, Detroit, Transit, R. R.—Total, 24.

PROPELLERS.

Odd Fellow, Clifton, B. F. Bruce, Hercules, Delaware, Globe, Princeton, Fintry, Falcon, Gen. Taylor.—Total, 10.

BRIGS.

Trenton, Ospray, Algomah, Montezuma, Fashion, British Queen, Cortlandt, Alvin Clark.—Total, 8.

BARQUES.

Wm. Black, Badger State, America, Northern Light, Pomona.—Total, 5.

SCHOONERS.

Mary Kay, Telegraph, Banner, Canada, Wolverine, G. T. Williams, H. S. Hyde, Harwich, Atlas, Sparrow, Henry, Richards, Mt. Vernon, Crevola, Ingham, U. S., Fame, Avenger, L. M. Mason, Fortune, Blue Bell, St. Joseph, Storm, Dan Tucker, Deer, Mary, Syracuse, Palo Alto, Niagara, Nile, Ino, Marengo, C. Reeve, Homer Ramsdell.—Total, 33.

LUMBER AND COASTERS.

Lt. Louis, Lady, Sarah Ann, Globe, Flying Cloud, Blue Bird, Independence, White Pigeon, Swallow, F. Pierce, Foam, Cerro Gordo, Mystery, Eagle, May Breeze, Pilot, St. Clair, Elizabeth.—Total, 18.

Owing to the neglect of a large portion of the vessels arriving and leaving our port to make the proper returns required by law, we are unable to give an accurate statement of the amount and value of the imports and exports of the year, from and to American ports. This we very much regret, and hope in future to be able to supply this omission from authentic documents. The nearest we can approximate the exports is by the receipts of produce, &c., which were all for exportation, and was probably about half of the entire shipments of those articles from our docks.

Our foreign commerce of course is altogether with Canada, and reads as follows, for 1853:

Value of exports to Canada,	$282,303 04
" imports from "	94,415 95
Free foreign goods	80,658 75

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Either this trade is not greatly on the increase, or a new scale of valuation used; for nine years since, in 1844, it stood thus:

Exports,	$260,011 08
Imports,	80,744 94

That our new relations to that province will tend to the reciprocal advantage of both, is evident.

A considerable item in our commercial transactions now, and one which promises to grow with growing years, is the trade with the Lake Superior Mineral Region. During the summer past, steamers left our docks every other day, laden with miners' supplies, and bringing in return the rich productions of the mines. Propellers also were regularly engaged in the traffic. This is becoming a principal route of summer travel, both for those in quest of health and pleasure, and when the grand canal improvement is completed, will be one of great business.

RAILROADS.

Owing to the fact that the State projected an extensive Railroad system in an early day, and quite failed in carrying it out, as well as the great financial embarrassments of the few years past, we are now far behind many of our sister cities in the number and extent of this sort of improvements. Yet the spirit of the times, the interests of the city and State, and the *necessities of business* imperatively demand greater facilities, and the construction of several lines leading to sections which would contribute instantly and indefinitely to the building up here of a trade beyond the dreams of the most sanguine, and worthy of our fertile Peninsula. Our prosperity will be proportioned to our enterprise in this direction. So it has been with other places, some of which, with not half the natural advantages we possess, are outstripping us in the race. The present condition of things, both as to public and private credit, and the prospects for the future, eminently favor any possible outlay in this direction. The men of wealth among us, whose property would in many cases be increased in value ten fold, should see to it that no advantage or opportunity slip, by their remissness.

The principal line of road now leading to this city is the

MICHIGAN CENTRAL.

This road is 282 miles long, extending to the city of Chicago, in Illinois, and is under the control of a company, whose office is in De-

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troit. Their capital stock is $8,000,000. The road is completed and equipped throughout its whole extent, in the best and most permanent manner. Having heretofore had no winter connection with the East, it has not yet shown its true value and capacity for business; still its yearly dividends have ranged from 8 to 14 per cent., and its stock has stood much above par in the market.

The financial year of the Company closes on the first of June, so that we cannot give its statistics up to the present time:

Its receipts by report of last June, were $1,149,537 71
For previous year, ... 1,075,294 15

The business of the year was as follows:

Number of passengers carried, ... 247,552

AMOUNT OF FREIGHT MOVED.

Apples,	25,912 bbls.
Beer and Ale,	1,906 "
Ashes,	263 tons.
Barley,	94,426 bush
Buckwheat flour,	15 tons
Beans,	1,064 bush
Bran and Shorts,	1,090 tons
Beef,	6,872 bbls
Butter,	205 tons
Corn,	260,931 bush
Cornmeal,	346 bbls
Cheese,	146 tons
Cranberries,	1,036 bbls
Coal,	1,091 tons
Fruit, dried,	339 tons
Flour,	416,864 bbls
Furniture and Luggage,	2,084 tons
Grass and Clover Seed,	340 "
Garden Roots,	1,045 "
Ham and Bacon,	328 "
Highwines,	9,032 bbls
Hides,	224 tons
Iron and Nails,	3,194 "
Lime,	481 "

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Lumber,	12,377,535 feet
Lath,	295 tons
Leather,	321 "
Millstones,	10 "
Miscellaneous Merchandise,	23,208 "
Oats,	115,295bush
Other Agricultural Products,	268 tons
Plaster,	2,613 "
Pig Iron,	430 "
Pelts and Skins,	213 "
Pork,	11,678 bbls
Pork in Hog,	2,194 tons
Salt,	18,936 bbls
Stoves,	461 tons
Shingles,	7,888 M
Wool	593 tons
Wheat,	807,707 bush
Whisky,	4,647 bbls
Neat Cattle,	4,012
Horses,	584
Hogs,	12,432
Sheep,	7,161
Wood,	9,546 c'ds
Stone, Sand, Brick,	6,271 tons
Total in tons,	161,322

We have also collated a summary of the principal freights brought to Detroit, during the calendar year, 1853, which will show something of the produce shipments from this port; being for past years about one half the whole amount shipped:

Ashes,	1,140 casks
Barley,	76,571 bush
Berries,	338 bbls
Beef,	992 bbls
Butter,	79,380 lbs
Buckwheat flour,	17,534 lbs
Cattle,	3,622

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Corn,	212,784 bush
Flour,	406,659 bbls
Feed,	1,100,890 lbs
Highwines,	2,072 bbls
Hides,	146,825
Hogs, live,	7,769
" dead,	6,305
Lumber,	1,082,472 feet
Pork,	6,628 bbls
Rye,	600 bush
Oats,	341,082 bush
Seeds,	1,742 bbls
Sheep,	1,021
Wheat,	1,147,250 bush
Wool,	900,000 lbs

This account of course is not full, as it embraces only the principal items as reported from day to day. There is sufficient, however, to show a gratifying increase in the business of the road, which has now completed an eastern connection that will be of very great importance and benefit. The company is still further exhibiting its enterprise and intention to excel, by the construction of two steamers, the largest on fresh water, at a cost of $500,000. We doubt not they will soon be amply repaid for their very large but judicious expenditures. They have added much to the permanent business of this city, besides collecting a multitude of superior mechanics, a credit to any place.

Little if any less important to our interest, is the construction of the second line of road, which is

THE OAKLAND AND OTTAWA RAILROAD.

This line, designed to connect us with Lake Michigan in a Northwest direction, and with Milwaukee, is being urged forward with all possible speed. It is already in operation to Pontiac, twenty-five miles, from which it will be about two hundred miles through the richest section of our State, to the mouth of the Grand River. Lumber, Plaster, Lime, Salt, and Coal, are upon the route, which, with the agricultural productions, will give it an enviable business.

Most eligible and extensive grounds, having a River front, are secured in this city, and we expect soon to see its burdens of wealth pouring in

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upon us. If conducted with energy and care, it cannot fail to be one of the best paying investments.

GREAT WESTERN RAILROAD.

This most valuable auxiliary to all the interests of Detroit, extending to Niagara Falls, two hundred and twenty-seven miles, is but just completed, and is in successful operation. At the latter place it connects with all the Eastern routes, and gives us what we have long needed—access to the great markets, uninterrupted by any change of the seasons. Its advantages are obvious. The management is creditable, and so soon as sufficient facilities to accommodate business, offering, are prepared, it will equal any road in the country.

We have thus named the roads that exist, or have a *name* to do so, but we need several more leading towards the Northern and Northwestern portions of the State. One to Port Huron, to Saginaw, or rather to Mackinaw *via* Saginaw, &c., &c. Let us open the doors freely to foreign capital, if we have not enough thus to dispose of, satisfied that every great work of improvement will inure to the benefit of the place where located, whoever may hold the stock.

We have named only Railroads, but we should mention also the Plank Roads, of which about three hundred miles diverge from this point, and which are perhaps of more value to the city for local purposes than the Railroads. Indeed every road leading into the country is planked.

We need also an increase of Banking Capital, and facilities for the convenience of the business community. But we will leave this subject for some future occasion.

HEALTH OF MICHIGAN.

OFFICE OF THE MICHIGAN STATE AGRICULTURAL SOCIETY,
Detroit, June 21st, 1854.

WM. BRODIE, M. D.—*Sir:*—You are aware that many families in the New England and other States, as well as foreign countries, are seeking a home in the West. Those who intend emigrating have many questions to ask; one of the first of these, and very properly too, is, is it a healthy country? This question is often asked of me, with regard to Michigan, and as often answered in the affirmative. When gentlemen call

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on me for information respecting the climate, health, and resources of Michigan, I think I can answer their queries more to their satisfaction, by handing them, for their perusal, the Transactions of the Michigan State Agricultural Society.

In carrying out my plans, it appears to me to be necessary, that a paper, from one competent to furnish it, should be embodied in our reports, giving a true and reliable statement respecting the prevailing diseases of the State, and the liability to disease, as compared with either Eastern or other Western States.

Will you please furnish me with such a statement, for publication in the Transactions of the Michigan State Agricultural Society, and oblige,

Yours, truly,

J. C. HOLMES,

Secretary, Michigan State Agricultural Society.

DETROIT, June 22, 1854.

J. C. HOLMES, Esq., *Secretary Michigan State Agricultural Society:*

DEAR SIR—Your note of the 21st has been received, and I would beg leave to state in reply, that the subject is one that naturally interests all those who are leaving the places of their nativity, not only from foreign countries, but from the Eastern States, to make particular inquiry relative to the health of the place in which they may propose to locate themselves.

The prevalent diseases of Michigan, are those arising from Malaria, and although the most common is intermittent fever, yet this becomes much milder as the forests yield to the axe of the woodman, and the soil exposed to the action of the sun and atmosphere.

Billious fevers, which are the offspring of the same parent, are far milder, and much less dangerous, than in those States lying to the south and west of Michigan.

In fact, the diseases of the settled portion of our State, are fast changing, and approximate closely to those of the Eastern States.

As far as relates to epidemic diseases, Michigan has nothing inherent in herself, that would, or does render them any more severe and fatal than in other States.

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On the whole, I would state, that I consider the State of Michigan one of the most favorable for health, of any of those States that lie to the south, south-west, and west of her, and that she compares most favorably with those that are termed the New England States—with New York, New Jersey and Pennsylvania.

Respectfully yours,

WM. BRODIE, M. D.

REPORT ON THE ANALYSES OF WATERS.

BY PROFESSOR S. H. DOUGLASS.

LABORATORY OF THE UNIVERSITY OF MICHIGAN,
February 11th, 1854.

To the Board of Water Commissioners of the City of Detroit:

GENTLEMEN—On the tenth day of November last, I received from J. Houghton, Esq., Superintendent of your City Water Works, three stone-ware jugs, containing water from the following localities, viz:

No. 1. From the iron pipe at the residence of A. C. McGraw, on Jefferson Avenue, between Rivard and Russell streets, collected January 25th, 1854.

No. 2. From the wooden logs at the residence of Dennis Cuyle, corner of Orchard and Fifth streets, Crawford Park, collected October 5th, 1853.

No. 3. From a well at the residence of Amos T. Hall, on Woodward Avenue, Park lot 11, collected October 5th, 1853.

These waters were accompanied with a request to have them analyzed, and to report the result to you at my earliest convenience, with such suggestions, founded on the analysis, as I should conceive important, to be taken into consideration in the construction of the new Water Works. Having completed the analyses, I herewith submit the result.

Before proceeding to consider the composition of the waters above named, it may not be inappropriate to make a few remarks on the varieties of water in common use for domestic purposes; the impurities of each variety, and the sources of those impurities.

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These waters may be considered under three varieties:

First. Rain water, which includes water derived from rain, dew, hail, snow, or frost. When secured before it has come in contact with the earth, or any substance that can impart impurities to it, this is the purest natural water. It contains only a small quantity of air, carbonic acid, and ammonia. Not holding in solution any of the earthy salts, its tendency to dissolve other material with which it may come in contact is very greatly increased. For this reason, as ordinarily secured, it is far more deleterious than any water in use. Thus, falling upon tin roofs, and being conveyed by tin conductors, with lead soldering, to cisterns, a very perceptible quantity of the poisonous compounds of the latter metal, derived from the soldering, are invariably found dissolved in the water. This I have found to be particularly the case with the water collected from roofs that have been painted with white lead. Collected from shingle or gravel roofs, the evil does not exist to the same extent; yet, in being conveyed through tin conductors, with lead soldering, or lead pipe, is clearly perceivable. I do not hesitate to say that rain water, collected in the ordinary mode, used as an habitual drink, must prove highly injurious to health.

Second. River water. This stands next in purity to rain water. When its source is considered, it must be evident that the water of all rivers must be very far from being pure. The water of all our rivers, lakes, ponds, and oceans, has at one time existed in the air in a state of vapor, from whence it has been precipitated, in a pure state, as rain or snow. This water, coming in contact with the earth's surface, and frequently penetrating its strata, becomes impregnated with the soluble matter of each particular stratum. For instance, in leaching through a limestone or chalk formation, it would become charged with lime; or, in passing over a magnesian limestone, with lime and magnesia. Thus it will be perceived that this second variety of water must contain variable ingredients; and that a knowledge of the composition of the water becomes an index to the geology of a district, and a knowledge of the geology an index to the composition of the water.

Third. Spring or well water. Inasmuch as all the water of springs and wells has come in contact with, and leached through the earth, and usually very little time has been allowed for the separation of the clay, sand, &c., held mechanically in suspension, this variety may be consid-

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ered the most impure water in use. This is more particularly the case with the water from wells dug in a clay soil, and in large towns, where surface filth accumulates in great abundance.

WATER AS A SOLVENT.

In what form of combination are these earthy salts held in solution? This is a question of some considerable practical importance, and one with which all should be familiar. In some few cases, the water dissolves the substance directly, as silicia (sand) and sulphate of lime (gypsum;) while, in other cases, in order that the water should become a solvent, it must contain an excess of carbonic acid gas, or the salt must be in the form of a bi-carbonate. Thus pure water will dissolve little or no carbonate of lime, (limestone,) but allow the water to take carbonic acid, and convert the carbonate into a bi-carbonate, and it will readily dissolve a hundredth part of the limestone. It becomes a "hard water." By long exposure of this water to the air, or by boiling it, the free carbonic acid escapes as a gas, consequently, the water loses its power of holding the lime in solution. It becomes turbid and milky, and the lime is deposited. Hence, the calcarious deposits in the vicinity of "hard water" springs, and the calcarious incrustations on the inside of boilers. This carbonic acid is derived, in part, from the atmosphere, and in part from the soil. In the decay of vegetable matter, the carbon of the plant unites with the oxygen of the air, to form the acid. Hence, we find it very abundant in open, porous soils, highly charged with decaying organic matter. Water leached through such soils would acquire carbonic acid, and, coming in contact with limestone would dissolve it in great quantity. A "hard water" would be formed. Boiling expels the carbonic acid, and the lime is no longer dissolved. The water is made soft. If, however, the water is made "hard" by the presence of the sulphate of lime, the sulphate is not affected by boiling. In this case, the lime may be precipitated by the addition of carbonate of soda or potassa. An insoluble carbonate of lime is formed and precipitated, while the sulphuric acid unites with the soda. Hence, the great practical importance of knowing the precise condition of the lime held in solution—that is, whether it is a carbonate or sulphate.

Waters holding in solution the sulphates are liable to a form of spontaneous decomposition, highly deleterious to health, when they come in contact with organic matter, either animal or vegetable. All animal

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and vegetable matter contains hydrogen. In ordinary decomposition, this gas is liberated; and if, in the nascent state (at the moment of being set free from a previous combination,) it comes in contact with the sulphates, it decomposes them, uniting with the sulphur, to form sulphuretted hydrogen, or hydro-sulphuric acid. This is a very noxious gas, and its foul odor is perceived in the exhalations from bilge water, cesspools, drains, &c. Hence the necessity of avoiding contact with organic matter when the water contains the soluble sulphates. It should not be conveyed through wooden logs, or pumped through wooden pumps. The disinfecting property of chloride of lime depends upon its power to decompose and destroy this hydro-sulphuric acid.

ANALYSIS.

In conducting any analysis, the first object with the Chemist, is to determine what substances are present. This is called the qualitative examination, or analysis. In the case in question, an indefinite quantity was taken, and, having been divided into several parcels, the proper tests were applied, for the detection of every substance liable to be present in natural or mineral waters. This qualitative analysis resulted in the detection of the following substances:

	No. One. from iron pipe.	No. Two. from logs.	No. Three. from well.
Silicic Acid (Flint,)	Present.	Present.	Present.
Oxide of Iron,	Present.	Present.	Present.
Lime,	Present.	Present.	Present.
Magnesia,	Present.	Present.	Present.
Potassa,	Present.	Present.	Present.
Soda,	Present.	Present.	Present.
Chlorine,	Present.	Present.	Present.
Sulphuric Acid,	Present.	Present.	Present.
Phosphoric Acid,	Present.	Present.	
Carbonic Acid,	Present.	Present.	Present.
Allumina,	Present.	Present.	
Hydro-Sulphuric Acid,		Present.	Present.

Having thus fixed upon the presence of certain substances, attention was next directed to the determining of the quantity of each of these substances, or the quantitative analysis.

The total quantity of solid matter, in a definite quantity of water, after filtration, was determined by evaporating to dryness 3500 grammes

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(nearly one gallon) over a water bath. The following table will give the result:

	No. One. Iron Pipe.	No. Two. Logs.	No. Three. Well.
Solid matter in 3500 grammes,....	·3432	·3893	7·2000

In determining the quantity of the several substances indicated by the qualitative analysis, six parcels of water were carefully weighed out. The object in taking so many parcels was, to avoid the errors that might arise from the accumulation of impurities in the use of chemicals. From number one, the chlorine was extracted; from number two, the silica, iron, lime, and magnesia; from number three, the iron, magnesia, and lime, precipitated on boiling, and which are supposed to exist as carbonates, and the same elements held in solution; from number four, potassa and soda; from number five, sulphuric acid; from number six, allumina and phosphoric acid.

In determining the quantity of these substances, it must not be supposed that they were obtained and weighed in the forms above expressed, for this was the case with but a single substance—silica. All the rest were weighed in the form of some one of their combinations, and the quantity of the element sought, determined by simple calculation. This process is based on an invariable law in chemical science, that bodies unite in certain fixed and definite proportions. Thus, chlorine was weighed as a chloride of silver. Now, one hundred parts of the chloride of silver invariably contain 24·72 parts of chlorine, and 75·28 parts of silver. Lime was separated, as a carbonate of lime; magnesia, as a phosphate of magnesia; potassium, as a chloride of platina and potassium; sulphuric acid, as a sulphate of baryta, &c. In this manner, the Chemist attains to a degree of minuteness that would appear, to an unpractised person, wholly incredible. Thus a good balance will turn on the 1-000th part of a grain, (equal to three-tenths of an inch of fine hair.) One-thousandth part of a grain is a weighable quantity; and yet the one-thousandth part of a grain of chloride of silver contains but the 1-4000th part of a grain of chlorine, a quantity too small to be weighed, but one which may be calculated. It may be proper to state that the balance used was Robinson's, of the best German mannfacture. To avoid friction, the pans and beam are suspended on knife edges, and highly polished carnelian.

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The folowing table will exhibit the quantity of each substance in 1,000 grammes of water:

	Number One. Iron Pipe.	Number Two. Logs.	Number Three. Well.
Silica (Flint),	.00500	.00583	.02370
Oxide of Iron,	.00500	.01330	.00625
Lime,	.03528	.03192	.33590
Magnesium,		.00045	.08910
Potassium,	.00127	.00127	.10460
Sodium,	.00245	.00245	.28740
Chlorine,	Trace.	Trace.	.74890
Sulphuric Acid,	.00550	.00680	.21420
Phosphoric, "	.01430	.02385	*
Carbonic, "	.01766	.01060	.17635
Allumina,	.01050	.01050	*
Hydro-Sulphuric Acid,		Trace.	Trace.
Oxygen, with K. & Na.	.00111	.00142	.00960
Total,	.09807	.10839	1-99600

*Not determined.

In determining the manner in which the above substances are combined among themselves to form neutral compounds, the precipitates formed on boiling, were first considered as carbonates; and then recourse was had to the law that governs the distribution of acids and bases, *i. e.* the strongest acids unite with the strongest bases.

The following table will give the result of this calculation for 1,000 grammes, as before:

	No. One. Iron Pipe.	No. Two. Logs.	No. Three. Well.
Chloride of Potassium,	----	----	.11000
Chloride of Sodium,	----	----	.72520
Chloride of Magnesium,	----	----	.34760
Sulphate of Potassa,	.00288	.00283	.10450
Sulphate of Soda,	.00750	.00750	----
Sulphate of Lime,	----	.00254	.28260
Phosphate of Lime,	.03110	.05192	----
Allumina,	.01050	.01050	----
Magnesia,	----	.00073	----
Silica (Quartz)	.00500	.00583	.02370
Carbonate of Lime,	.03300	.00510	.39190
Carbonate of Iron,	.00814	.02160	.01020
Total,	.09807	.10865	1-99570

From the above table, a very marked difference will be perceived, in the composition of the water taken from the wells and that from the iron pipe or logs. The large quantity of the chloride of sodium, (com-

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mon salt,) chloride of potassium and magnesium, found in the former, clearly indicates its surface origin. The two last salts are cathartic in their properties, and the habitual use of water, holding them in solution in any considerable quantities, must prove injurious to health.

In addition to the above impurities, the wells of Detroit, being dug in a clay soil, and usually in back yards, would be liable to contain organic matter in process of decomposition. This would be particularly the case during the warm season, when sickness is most likely to prevail. The use of water containing this organic matter would predispose to disease, and materially aid in the spread of epidemics. No doubt a careful examination would show that, during the prevalence of the cholera, that disease was more fatal, and prevailed to a greater extent among those using the water of the wells, than among those in the habitual use of river water. My limited acquaintance with the distribution of water in your city, and with the localities where the disease was most prevalent, does not enable me to furnish examples in confirmation of this position. From Dr. Terry, I obtain the following case in point:

"During the prevalence of cholera in Detroit, in the summer of 1850, I was called to see the wife of Mr. T. F., whom I found in a state of collapse, from which she did not rally, but died in about twelve hours. My attention had been previously called to the effect of well water in developing cholera; but, in this case, there had been such other apparently exciting causes, that I did not even inquire in regard to the water used by the family. The next day I was called to see the two sons of Mr. F., and found them under the care of two physicians. One was severely sick, and the other in a hopeless state of collapse, from cholera. They had been under treatment some hours when I arrived. The first one recovered, and the second died in a few hours.

"I then, for the first time, learned that two persons in the adjoining house had died of the same disease within two days, and my attention was at once directed to the water used by these families, which proved to be water from a well, common to both. Mr. F.'s family consisted of himself, his wife, two boys, and a daughter, the children all under seventeen years of age, the daughter the younger. Mr. F.'s employment was at a place where he had access to, and used the water of the river. All the rest used the well water. To recapitulate, Mrs. F. and the elder boy died; the younger just escaped, and the girl had severe diarrhœa,

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which would have soon developed cholera, had not immediate precautions been taken. I prohibited the use of the well water, and from that time there were no more cases in the family. On the same street, immediately opposite, there were certainly two deaths (and I think three) from cholera, in a house in which well water was used. It was reported that other instances of the same kind occurred on the street, but for this I cannot vouch.

ADRIAN R. TERRY, M. D."

I have also been informed by Professor Palmer, of Chicago, that this disease has been observed to be most fatal in that city, in those districts where well water was used, although the most high, and apparently the most healthy. The lower districts, containing such quantities of surface water and filth as entirely to preclude the use of well water, were supplied with water from the lake by carts, and were comparatively free from this disease.

Again, the city of Sandusky is situated on a clay soil, underlaid by a limestone, and is supplied with water, mostly from wells dug in this tenacious clay. The water must not only be highly charged with lime and other earthy salts, but likewise contain large quantities of decaying organic matter derived from surface drainage. I am fully of the opinion that the fearful ravages of cholera in that city may be, in a great measure, attributed to the use of impure water.

It is a well established fact, that, in the city of Cincinnati, of all persons who used the water of certain springs during the prevalence of the cholera, not one escaped fatal attacks of the disease.

Other examples might be given, drawn both from this country and Europe, illustrating the effect of water on the spread of epidemics, as a predisposing cause; but this is not the place for a lengthy discussion of this subject.

The chemical analysis of the river water, leads to the following useful conclusions:

1st. The carbonates are found in very small quantities. As very little precipitate is formed on boiling, the water cannot be improved as to its "hardness," by the application of heat.

2nd. The sulphates and phosphates are the most abundant salts held in solution. The presence of the former, for reasons already stated, would forbid the use of wood-conducting logs. That hydro-sulphuric

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acid is formed by the spontaneous decomposition of the sulphates, is shown by the presence of this noxious compound in the water taken from the logs.

3rd. The analysis of number one, from the iron pipe, shows it to be water superior to that of most other cities. Thus, an examination of the annexed table, will show that it contains less solid matter in the gallon, than either the Croton or Cincinnati water, but more than the Fairmount or Long Pond water. In estimating the value of your city water, as compared with the water of other cities, due allowance must be made for the fact, that the total solid matter is materially increased by the presence of silica, allumina and iron, elements that can produce little or no injury, while the chlorides, much the most injurious compounds, are entirely absent. The presence of such large quantities of silica and iron, is accounted for, by the fact that Lakes Superior and Huron are formed, for the most part, in a basin of ferruginous sandstone and igneous rock. It will also be observed that the carbonate of lime is more abundant, in the water collected in February, than October. This arises, doubtless, from the change of temperature, the cold water holding much more lime in solution, than when warm.

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Analyses of Natural Waters: Showing the Quantity of Compound Ingredients, in Grains Troy, in an American Standard Gallon, (58372 Grains,) of each of the Specimens.

	Schuylkill River, Fairmount.	Croton River.	Charles River.	Spot Pond.	Long Pond, Boston Water-works.	Mystic Pond.	Ohio River at Cincinnati.	Detroit River, Iron Pipe. Collected in Feb.	Detroit River. Logs. Collected in Oct.	Detroit Well.
Chloride of Potassium,					.0380	.1590				6-4192
Chloride of Sodium,	.1470	.1670	.1547	.3969	.0323	27-9110	.4773			42-3200
Chloride of Calcium,		.3720	.0420		.0308	.1544				
Chloride of Magnesium,	.0094				.0764					20-2846
Chloride of Allumina,		.1660								
Sulphate of Potash,							.0125	.1651	.1651	6-0982
Sulphate of Soda,		.1530	.3816	.2276				.4376	.4376	
Sulphate of Lime,		.2350	.2624			1-2190			.1482	16-4915
Sulphate of Magnesia,	.0570				.1020	1-9768	.7738		.0426	
Sulphate of Allumina,						.4478				
Phosphate of Lime,								1-8148	3-0298	
Phosphate of Allumina,		.8320	.0973	.1081		.2810				
Allumina,					.0800			.6127	.6127	
Silicic Acid,	.0800	.0770	Trace.	Trace.	.0300	.5559	.2694	.2917	.3402	1-3830
Carbonate of Lime,	1-8700	2-1310	.1610	.3722	.2380	.9894	3-2615	1-9257	.2976	22-8698
Carbonate of Magnesia,	.3510	.6620	.0399	.1420	.0630	.1698				
Carbonate of Manganese,		Trace.								
Carbonate of Iron,							Trace.	.4750	1-2605	.5952
Salts of Soda, with Nitric and Organic Acids,	1-6436	1-8650	.5291		.5295		1-3215			
Total Solid Matter,	4-2600	6-6600	1-6680	1-2468	1-2220	34-7671	6-7361	5-7226	6-3343	116-4615
	Analyzed by Prof. Silliman, Jr.						Analyzed by J. M. Lock.	Analyzed by Prof. Douglass.		

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The purity of water is not simply a matter in which is involved health and convenience in domestic economy; for, to the manufacturer, where water is used as a solvent, it is exceedingly important that it should be pure. "Brewers often go to an enormous expense in boring deep wells, in order to obtain a supply of soft water, for extracting all soluble matter from the malt and hops they employ. Dyers, also, bore wells, in order to obtain a supply of soft water, as certain colors cannot be dyed, where water, containing the ordinary impurities, comes in contact with the dye-stuffs. Bleachers, again, require pure water; and many other branches of manufacture might be mentioned, where pure water is absolutely indispensable."

You have requested me to direct my particular attention to the propriety of using lead service pipe, in the conveyance of river water. I approach this subject with great reluctance, for I am well aware of the important bearing it has upon the health of your city, and equally well aware that, at present, there is no little discrepancy of opinion among scientific men, as to the circumstances in which lead pipe may be safely used. This disagreement arises, in part, from the difficulty in determining, precisely, what water does not corrode lead, and, in part, from the evil effects of the lead on the system, so nearly resembling diseases produced by other morbific agents, as not always to be clearly distinguishable from them. Not having made any experiments myself to determine the action of water on lead, except in the case of rain water, I shall be compelled to rely on the experiments and views of others. I have already deprecated the use of lead pipe for the conveyance of rain water. No one will question the impropriety of thus using it. It is said, however, that most spring and river water contains a sufficient quantity of the neutral salts, to form an insoluble lining on the inner surface of the pipe, which most effectually protects it from further decomposition. Thus, Dr. Christison states, that "water containing 1-000 or 1-1200 part of salts, may be safely conveyed in lead pipe, if the salts are chiefly sulphates and carbonates, and that lead pipes cannot be safely used when it contains 1-4000th part of saline matter, if this consists of muriates."

At the request of the Board of Consulting Physicians of the City of Boston, Professor E. N. Horsford, of Cambridge, in 1849, examined with great care, the relations of lead to air and water, and gives the following as his conclusions:

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"A coat of greater or less permeability forms in all natural waters, to which lead is exposed. The first coat is a simple sub-oxide, absolutely insoluble in water, and solutions of salts generally. This becomes converted in some waters into a higher oxide; and this higher oxide, uniting with water and carbonic acid, forms a coat, soluble in from 7,000 to 10,000 times its weight of pure water. The above oxide unites with sulphuric and other acids, which sometimes enter into the constitution of the last coat; uniting with organic matter and iron rust, it forms another coat, which is in the highest degree protective.

Dr. Horatio Adams, in a lengthy and very able report, before the American Medical Association, at its Annual Meeting in 1852, deprecates the use of lead pipe for the conveyance of water under any circumstances. Having shown, both by analysis, and its effects on the system, that lead is present in the Cochituate water drawn through lead pipes, also in the Croton water, the New Orleans water, the Cincinnati and Louisville water, he concludes: "That it is never safe to use water drawn through lead pipes, or stored in leaden cisterns, for domestic purposes; and that any article of food or drink is dangerous to health, which, by any possibility, can be impregnated with saturnine matter."

Gmelin, a distinguished German Chemist, does not differ from Christison.

On the whole, as it is at least, doubtful, whether the solid matter contained in any of the varieties of natural water, will effectually protect lead from dissolving, and especially as the water of Detroit river contains less solid matter than either Christison or Gmelin consider necesaary for that purpose, I am inclined to discourage the use of lead service pipe, at least until it can be clearly shown that no evil results therefrom. Block tin service pipe, or lead pipe, lined with tin, would not be liable to the same corrosion. I would, therefore, recommend it as a substitute for the lead pipe.

SILAS H. DOUGLASS,
Prof. of Chemistry, &c.

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CROTON AQUEDUCT DEPARTMENT, ENGINEER'S OFFICE,
New York, Sept. 18, 1852.

To MESSRS. THOMAS O. LE ROY & Co.:

GENTLEMEN—According to your request, I have made experiments upon pure tin service pipe, now manufactured by you. To test its comparative as well as positive strength, I had two pieces of pipe, one tin and the other lead, joined together, so that the two composed one length, every part of which would be subjected to the same strain, under any experiment tried, and in order to test at the same time, in regard to the tin pipe, the efficiency of what is called a "wiped joint," the tin portion was cut in two, and a "joint" wiped on it in the manner usual with lead pipe. All conditions of both lead and tin pipe being thus provided for, the length was connected with one of our hydraulic proving pumps, the regular load of which is 300 lbs. (three hundred pounds) to the square inch. From this point different experiments were made, until the pump was worked up to ten hundred and fifty-eight pounds (1058 lbs.) to the inch, at which point both lead and tin pipe remained unaffected. The pump was now worked up to pressure of 1104 lbs. (eleven hundred and four pounds) to the square inch, when the lead pipe burst. The tin pipe, however, remained unchanged. Under the closest examination, no sign of imperfection could be perceived in the joint; and the application of the calipers to the pipe proved that no part of it had been in the slightest degree enlarged.

I may here add, that the "wipe" joint was afterwards cut and examined by me, and proved to be by no means one, in the making of which great care seemed to have been used, but rather to the contrary. The thickness of the tin pipe thus tested was 3-32ds (three thirty-seconds) of an inch; its bore 5-8 (five-eighths) of an inch. The lead was what is known as "extra strong," and its thickness was 7-32ds (seven thiriy-seconds) of an inch, and its bore 5-8 (five-eighths.)

The result of these experiments seem to me conclusive. You have obtained what has long been the great desideratum in the water service of this city—a pipe which will not affect, nor be affected by the water, while it has all the advantages which malleability and strength give to lead for service pipe in our houses. The only obstacle heretofore existing in the way of tin pipe, has been its cost. This, you have happily been able to overcome. The cost of manufacture you have de-

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creased by your machinery; that of the material, you are enabled to reduce to that of lead, by the decreased quantity of metal required for tin pipe for the same, or even greater strength.

I think we may congratulate ourselves upon having thus placed within our reach, this, the perfection of service pipe; and I cannot but hope that, for their own sakes, our citizens will at once adopt its general use.

I am, gentlemen, respectfully, your obedient servant,

A. W. CRAVEN,
Chief Engineer, &c.

Table, showing the Comparative Cost of Medium Lead and Block Tin Pipes.

Calibres in inches and parts,	½	⅝	¾	1	1¼	1½	2
Lead Pipe, cost per foot in cents,	12	20	24	31	33	46	60
Block Tin Pipe, cost per foot in cents,	18	24	26	32	42	48	84

GEOLOGICAL REPORT.

OFFICE OF THE MICH. STATE AGRICULTURAL SOCIETY,
Detroit, May 25th, 1854.

BELA HUBBARD, Esq.:

SIR—The frequent enquiries at this office, for information respecting the Topographical, Geological, and Mineralogical features of Michigan, as they relate to the Mining and Agricultural operations of the State, and deeming a very general diffusion of such information, of great importance to our present and future welfare, and finding in your reports for 1840 and 1841, as Assistant State Geologist, much reliable information of the character sought for, I think the transfer of those reports to the pages of the "Transactions" of the Michigan State Agricultural Society, will greatly enhance the interest and value of the work.

I have, therefore, decided to make such transfer, and if any corrections, alterations, or additions, to these reports, suggest themselves to you, whereby they would be rendered more valuable, I would thank you to make them.

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My object is a diffusion of such knowledge as may be of practical utility to our citizens, as well as to give to those who are seeking a home in the West, some idea of the vast resources of our State; for I feel positive that no State in the Union holds out greater inducements to the capitalist, or agriculturist, for an investment of their capital and labor, with a prospect of speedy and rich returns, than does Michigan. An early reply to the above, will much oblige

Yours truly,

J. C. HOLMES,

Sec'y Mich. State Agricultural Society.

—

DETROIT, May 27, 1854.

J. C. HOLMES, Esq.:

DEAR SIR—In reply to your communication of the 25th inst., I would state, that the Geological Reports to which you refer, constitute part of the Annual Reports made to the Legislature, by the State Geologist, showing from time to time, the progress and results of the Geological Survey of the State. So far as regards their correctness, there is no occasion to suggest a change in any material point. It must, however, not be overlooked, that these reports constitute only parts of a whole, it being barely intended to digest the scattered information contained in them, and in the field notes, maps and sketches made by the Geological corps, into the order and system necessary for a final report. This intention was unfortunately defeated by the embarrassed condition of the State finances, and the untimely death of Dr. Houghton, leaving a large part of the work, particularly in the Upper Peninsula, incomplete.

At an early day in the history of our State Agricultural Society, it was my intention (acting upon your suggestion) to prepare a general synopsis of the Geological and Mineralogical features of Michigan, for publication in the "Transactions." Some memoranda were made with that view, but finding the attempt called for more labor and time than it was possible for me to devote to it, in order to bring the various details into adequate form, the task was abandoned. I regret that the continued pressure of business impels me to forego this interesting labor.

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You justly remark upon the singular inducements, which our favored State present to the capitalist and the agriculturist. Michigan, indeed, holds a proud position in regard to the commercial and industrial interests of our country. The investigations of her Geological Survey disclosed the fact, until then unknown, that the rocks of our lower Peninsula constitute one of those great wave-like undulations of the carboniferous strata, which spread over so extensive a portion of the middle and western States, and which here form a distinct coal basin, entirely within the limits of the State. A future age only, can fully appreciate the value of the mineral products of this coal basin, with its associated beds of iron, gypsum and salt; a value far surpassing that of the gold of California or the silver of Mexico, and bearing a far more direct and fortunate relation to the wants and industrial pursuits of our population.

The information contained in the annual reports of the Geological Survey, though necessarily disjointed, is of great value, and is in the hands of comparatively few of our citizens. But few practical operations have been commenced, since the publication of those reports, to test the value of the information therein contained, and many persons are disposed to doubt the existence of some of the facts indicated. The conclusions of science, nevertheless, remain unchanged, and the attempts which have been made to develop them more fully, at particular localities, are in practical confirmation of these conclusions.

The gypsum, or plaster beds of Kent county have been extensively worked near Grand Rapids, for the last ten years, and have yielded a supply which may be extended to meet all the increased wants of the State. It is of a quality far surpassing that which is imported, in large quantities, from the State of New York, and is equalled in purity and beauty only, by the celebrated quarries of Nova Scotia.

The coal of the north-east part of Ingham county, has recently been mined to considerable extent, by R. R. Lansing, Esq., whose published "Exposition" is sufficient to show the actual and prospective value to our State of the beds of this mineral, which have been subjected to practical test.

In reference to the coal of Michigan, I may here remark, that the basin which lies within our Lower Pinansula, though small compared with those of which some of the States can boast, is yet of no mean

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extent. Its most southerly border is in Jackson county, and its extent easterly and westerly, from Saginaw Bay to Grand Rapids. Assuming the Saginaw and Maple Rivers as the line of its central axis, and that it extends no further north from this line than its known southerly limit, the coal beds of Michigan may be considered as embraced in an irregular basin, having a length in its longest axis of about 140 miles, and a breadth of 80 to 100 miles, and covering an area probably, of not less than 9,000 square miles. The difficulty of conducting explorations over this large area, owing to the immense accumulation of loose materials which everywhere cover the rocks, has been sufficiently explained in the annual reports alluded to.

I shall only further, and briefly, allude to the salt deposits of our State. It is generally known that the State made an attempt to develop the manufacture of salt, but the reason of the failure of this attempt, and the fact of the existence of brine of sufficient strength and purity for the profitable manufacture, may not be so well understood.

The State Geologist early pointed out the fact of the existence of large salt deposits, and indicated the points at which borings might be most profitably conducted. These were commenced in 1839, at Grand Rapids and Tittabawassa river. Owing to the great expense and difficulty at that time, of obtaining the necessary materials for the undertaking, no sufficient appropriations were made, and the works were abandoned when the borings had proceeded to not more than half the depth indicated, as that which would be found necessary, the latter being estimated at from 600 to 700 feet. Even at the depth reached, on Grand River, (about 300 feet,) the quantity and strength of the brine discharged, exceeded that obtained at any of the salt works in the country, except those of New York, being not less than 130 gallons per minute; of which about 100 gallons contained a bushel of salt. At the same time, a private enterprise, undertaken at Grand Rapids, by the Hon. Lucius Lyon, had conducted borings to a depth of 400 feet, yielding a brine, when the upper fresh waters could be shut off, of which, about 82 gallons contained a bushel of salt. None of these borings, however, had extended into the lower salt rock a sufficient depth to reach the strongest brine, and the great difficulties attending the work, in connection with the small facilities for securing a market, and for

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competition with the rich salt springs of western New York, induced a temporary abandonment.

Thus much may be said, that there can be scarcely a doubt, that when these difficulties shall have been surmounted, as they must soon be, Michigan will not only furnish salt sufficient for the consumption of her own population, but her salt wells will be second in character, and yearly profit, to none in the United States.

The completion of the Oakland and Ottawa Railroad, will do more than any event that has occurred, to develop our resources of Coal, Plaster, and Salt; passing, as it will, through the heart of those portions of our State, which abound in these minerals, and which are, at the same time, not behind any in their agricultural capabilities.

Some of the other mineral products of the State, mentioned in the annual reports, have also, since their date, been more fully developed. The Kidney-iron of Branch County, and the Bog-ores of Kalamazoo, are now worked with profit; and the value of Marl, both for lime, and in its application to the soil, as well as its abundance, is now known and appreciated throughout the State.

I subjoin a reduced copy of a Diagram, which was intended to illustrate my Report of 1840. It should have accompanied that Report, but was omitted, as there was at that time no engraver in the State who could execute it.

It is intended to show the rocky bases which would be brought to view, if the country could be cleft through, in a line from Lake Erie to Maple River, in Clinton County. The rocks in this section are grouped according to their distinguishing characters and relative position; and each group is distinguished by an alphabetical letter. The sub-divisions of some of these groups, their contained minerals, &c., are described in that Report. The diagram *reversed*, will give, as a section of the rocks, from the same central part of the coal basin, to Lake Michigan, at Traverse Bay.

I will close, with the hope, that your laudable endeavors to diffuse a more general knowledge of the resources of Michigan, may meet with the proper appreciation.

Truly yours,

BELA HUBBARD.

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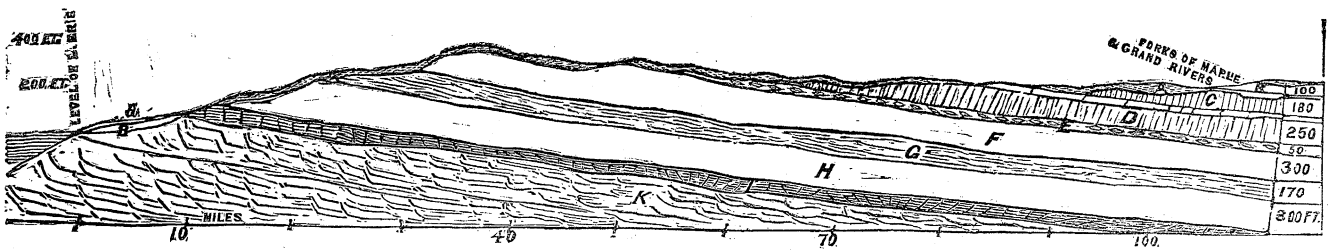
GEOLOGICAL SECTION,

EXHIBITING THE ORDER AND COMPARATIVE THICKNESS OF THE ROCKS OF THE PENINSULA OF MICHIGAN, SOUTH OF SAGINAW BAY.

BY BELA HUBBARD.



Dip, about 11 ft. to the mile. Exaggerated in the above Section.

EXPLANATION OF THE GEOLOGICAL SECTION.

A. Erratic block group. *a.* Ancient Alluvion.
B. Clay deposits.
C. Coal measures. Upper coal and shales, and included sandstones; lower coal and shale, limestone stratum. (*l.*)
D. Sub-carboniferous sandstones.
E. Clay and Kidney iron stone formation.
F. Sandstones (of Pointe aux Barque.)
G. Argilaceous slates and flags (of Lake Huron.)
H. Soft, light-colored sandstones.
I. Black, alluminous slate.
K. Lime-rocks (of Lake Erie.)
[DEVONIAN SYSTEM.]

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The following are the Reports heretofore referred to:

DETROIT, January 12, 1840.

To Dr. DOUGLASS HOUGHTON, *State Geologist:*

SIR—In compliance with your instructions, my time during the past season, has been devoted to a detailed examination of the southern range of counties, and of so much of the counties east of the principal meridian as could be accomplished before the setting in of winter. The counties completed, and on which I have the honor to submit the following report, are Lenawee, Hillsdale, Branch, St. Joseph, Cass, Berrien, Washtenaw, Oakland and Livingston.

A report on the counties of Wayne and Monroe was submitted you last season.

These examinations have embraced the collection of all facts of a geological and agricultural character which could serve to illustrate the capabilities of the soil, and the general wealth and resources of the country.

More than one hundred varieties of soils for future analysis, and specimens illustrative af all the rocks, have been added to the State Cabinet.

In connection with these objects, I have been able to fill up the skeleton maps, furnished by the State Topographer, of each town in the several counties, in such a manner as to afford at once a complete view of the soils, timber, and topographical details, courses of streams, village and mill seats, and all the recorded roads of the townships; to correct errors in streams and lakes, arising from inaccurate surveys, and to plat a great number of lakes, streams, &c., which were altogether omitted in the notes of the original surveys. These are now in readiness to be applied to the reduced scale adopted for the county maps. When the arduous nature of the labor thus assumed, in addition to that constant attention required by the minute investigations in the geology proper, is considered, I trust you will sufficiently appreciate the difficult character of the work.

You will necessarily perceive, that in a report embracing the investigations made over so extensive a district, it is manifestly impossible to include more than a very small portion of even the purely practical information collected, without swelling the report to a much larger bulk than would at this time be desirable. I have therefore selected the

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most prominent details only. A transcript of my field-notes will be placed in your hands, for such general reference as may be important hereafter, for obtaining greater minuteness and accuracy of information.

TOPOGRAPHICAL FEATURES.

The leading characteristics of the surface of the Peninsula, were treated at large in the report of the State Topographer, of last year. By reference to that able document, it may be seen at once, what relation the counties mentioned, have to its distinguishing features. "It appears," says his report, "that there is a swell of land which may be called the true *water-shed*, running from Pt. aux Barques, south, 45 deg. west, and passing out of the State into the northeast corner of Indiana, about equi-distant from Lakes Erie and Michigan. It attains its greatest elevation in Hillsdale county, seven miles east from Jonesville, where it is 633 feet above the surface of Lake Michigan. Its summit on the Central Railroad, at the division line between Jackson and Washtenaw counties, fourteen miles east of Jacksonburgh, is 437 feet. In the village of Pontiac, in Oakland county, it is 336 feet. It then again rises, and at the head waters of Belle River, in Lapeer county, is 414 feet. From this point it gradually falls off, and with a few rills, descending on its north and eastern slope, sinks to the level of the beach of the Lake."

The summit level of this swell is frequently comprised within two parallel ranges of knobs, or conical hills, generally elevated above the intermediate space, and occasionally taking a somewhat mountainous form; the peaks having an altitude above the actual surveyed levels, of 100 to 300 feet. But such peaks occur in the range only at distant intervals.

In the north-west corner of Washtenaw, these parallel ranges are very conspicuous, including a breadth of four or five miles, and have received the name of "Short Hills." The intermediate surface is very rolling and broken, with remarkable basin-shaped depressions. Beyond the ranges of elevated cones which bound the short-hill district, the country continues broken for about a mile, and then subsides to a gently rolling or undulating surface.

Upon this summit level of the Peninsula, are situated the greatest proportion of those small lakes, which are so common in the landscape of Michigan, and in these most of our streams originate.

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Similar rolls of land, of much less altitude, but having the same general direction, give an occasional broken aspect to the country, for some miles, after descending from the summit. In the main, the surface should rather be classed as undulating, than rolling, beyond this peculiar elevated district.

Plains and small prairies, having no apparent order of place, are common, particularly in the counties of the southern range, west of the dividing ridge. Some of these have a perfectly plain surface, as Pigeon Prairie; others lie in gentle swells, like the prairie of Nottawasippi; while others partake of the rolling character of the country adjoining, as do most of the prairies of Cass county.

EXTENT OF TIMBER.

A continuous tract of heavily timbered country occupies the eastern, and a large part of the southern border of the Peninsula. Within this tract, "opening" and plains are found only over limited areas; without it, heavy timber occurs only in isolated tracts.

Commencing on Shiawassee River, the line of timber passes through the southern part of Genesee county, the south-west part of Lapeer, and the western part of Macomb; thence by south-west course, through the southern part of Oakland, and eastern of Washtenaw; thence bending westerly, it continues in a very irregular course through Lenawee, Hillsdale and Branch, when it turns to the south, and enters Indiana.

A large tract of heavy timber enters the counties of Berrien and Cass, from the west, and skirts the lake through nearly the whole of Berrien.

SOILS.

The soils throughout the districts examined during the past season, are so varied, as well as so independent of the rock formations, that no classification of them is admissible. The nature of the deposits which constitute their base, will be noticed under the observations on the geology of these counties.

Extensive collections of soils were made, of which it is designed to give a systematic analysis when the collections of all the soils of the State shall be complete. Many of these soils have the appearance of barrenness, which, from the salts contained, are, nevertheless, eminently fertile, and unrivalled for the production of the grains most important to man.

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SCENERY.

The stern rules of science many seem to compel the geologist to take little note of the merely picturesque features of the landscape, yet, called as he is, to view them in their wildest character, he cannot be altogether insensible to the grandeur and majesty, or the variety and bloom of Nature. The sublime mountainous scenery of the Eastern States, has been often and justly dwelt upon with admiration, by both the geologist and the traveler. Little of the Peninsula scenery partakes of the grandeur of primitive and more broken districts, but none can fail to notice one superior charm, which more than compensates, in the eyes of those who are content to overlook the romantic aspect of the land, for the consideration of its solid bounties. To the cultivator of the soil, every consideration which its picturesque character presents, will yield before the more practical one of its fertility.

But few could have traversed the varied portions of our State, over which my duties during the past season have led me, and compare their rich scenery with that of more eastern lands, with any feeling of disappointment. The ordinary character of the "openings," is that of a majestic orchard of stately oaks, which is frequently varied by small prairies, grassy lawns, and clear lakes. These magnificent groves were, until within a few years, kept free from under-brush by the passage through them of annual fires, allowing successive growths of herbage to spring up luxuriantly, covering the surface with a profusion of wild flowers and verdure.

The variety, so essential in a landscape of woodland, glade, and sheets of water, are here combined in a manner which seems the result of art, but which is not less truly inimitable. It is difficult to resist the impression that we are surveying an old abode of civilization and of tasteful husbandry. It resembles those exquisite pictures of Park scenery, where the vision roams at will among clumps of lofty oaks, and over open glades, gemmed with flowers; while the distant woodland bounds the horizon, and the velvet-skirted lake gleams upon the eye as it reflects the light of the open prairie, or is faintly visible from the bosom of the glen, reposing in silent loneliness.

Such scenes, it is true, are destitute of the rough majesty of mountain aspects, but they have that all-pervading, tranquil *beauty* which forsakes the lofty hill-side and the hoary cliff. They present Nature in her sim-

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ple loveliness, without her stern aspect and masculine attire. She has bestowed her blessing upon the land, and spread over it her robes of beauty.

The limits of an annual report, prevent more than this very meagre notice of some of the characteristics of our Peninsula scenery.

GEOLOGY.

Before entering on a description of the geological structure of the southern counties of our State, it may be useful, for a more general comprehension of the subject, to premise a few leading facts relative to the geology of the western States generally.

It is well known to those acquainted with the geological character of the States west of the Alleghanies, that a large portion of that vast country, designated as "the Valley of the Mississippi," is lime-rock—the transition or sub-carboniferous limestone of European geologists. This extensive rock formation may here be traced over more than a million square miles.

A distinguishing feature, and one which gives character to this whole country, results from the fact that this and its superincumbent rocks have been thrown, by some uplifting force, from a horizontal position, and made to assume the form of vast undulations, like wave following wave. Several immense and distinct basins are thus produced, the sides of which *dip* towards the centre, but at an angle so small as seldom to exceed the fraction of a degree. This characteristic basin form, is still further preserved, by the circumstance that frequently the overlying rocks, which embrace the carboniferous formation, or coal measures, have been removed from the ridges of these wave-like undulations, or at least are found occupying only the interior of the basins. In following, therefore, from these ridges of lime-rock in direction of the dip, we come successively upon the next overlying rock, till we reach towards the centre, the highest rock of the series.

It must not hence be inferred, that the topography of the country always conforms to this basin-like condition. On the contrary, the centre of the basin may be either higher or lower than the extremities, or be cut across by streams, or present an irregular and hilly aspect. The dip and order of succession of the rocks, however, remains the same.

We have thus premised so much of the grand features of the geology of the great Valley country, as to render intelligible to the general

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reader, the remarks which follow, on the rock formations of the above named counties.

Great difficulty has been experienced in conducting the details of geological examination necessary for arriving at general results, from the circumstance of the face of our rocks being almost universally covered with a thick mantle of diluvium. This diluvium consists in part of the detritus of the upper portion of our coal series, which has been broken up and washed away, and in part of sands and fragments of the primary rocks, transported from a more northerly region. Owing to this, the rocks of the carboniferous group but seldom make their appearance at the surface; and the country being little broken by ravines or deep water-courses, the outcrop of the rock is not frequent, even where we would be led most to expect it. On this account, I have been compelled to inquire out and examine the deepest wells, and the most important results have been obtained in this rather unsatisfactory manner. This circumstance has not only prevented my defining the variety of rock strata with perfect accuracy, but renders it not improbable that strata which actually exists in place, were not discovered, in consequence of the thick covering of transported materials. Thus, the rocks which intervene between the great lime-rock formation, and the iron formation of the carboniferous series, (including the shale stratum and sandstones of the Ohio Geologists, and the black slate and limestones of Indiana,) are either entirely absent from the southern border of the coal basin of Michigan, or were not visible after the strictest search.

With this qualifying observation, I shall proceed to a brief description of the strata, as far they could be determined, within the district assigned me.

I.—LIMEROCK.

The limerock of the south-eastern part of the Peninsula, and whose outcrop is seen on the western coast of Lake Erie, is a portion of the great formation described above. Its place is higher in the series than the blue limestone and shales of Cincinnati, but below the black slate, and without doubt is equivalent in position to the "cliff limestone" of Indiana. Inland from the lake the limerock makes outcrops at numerous points, which are found to be in distinct ranges, having a direction

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north-east and south-west, across the Counties of Monroe and Wayne, and dipping north-westerly.

That portion which occupies the more easterly range is a compact rock, of a color varying from light gray to blue, sometimes veined, and occasionally oolitic, and is well characterized by its distinctive fossils. In some portions of it, crystals of sulphate of strontian are abundant.

The highest portion of the limerock formation, seen through the western part of Monroe County, is somewhat sparry, geodiferous, and bituminous, and characterized by a few fossils of different species.

Intermediate between those two portions of the formation, in this County, is a very siliceous rock, approaching in some instances almost to pure sandstone. It is composed of quartzose grains, easily disintegrating into a beautifully pure and white sand.

As the limerock of Monroe and Wayne was fully described in my report on those Counties, of last year, I shall avoid a repetition of local details.

ECONOMICAL CONSIDERATIONS.

It will be perceived, by reference to the Report alluded to, that this portion of our State affords a very great abundance of limestone for several important practical purposes.

Quick-lime is extensively made, and supplies the wants of this section of country. The limestone which occupies the highest range, (and from which lime is made extensively in the Macon Reservation,) has been described as strongly bituminous. This character of stone, owing to a chemical action which takes place in the kiln, renders it very superior for the above purpose. When brought to a red heat, the carbonaceous matter begins to react on the carbonic acid, which is a constituent of limestone, and converts it into carbonic oxide, which having no attraction for lime, is driven off, leaving the lime of a pure white, and perfectly caustic, with less consumption of fuel, and in less time than is required by any other limestone. Being porous, it falls into an exceedingly fine powder by water or expo ure; a quality which renders it particularly valuable to the farmer or builder.

Water-lime.—By experiments made "in the small way," it appears highly probable that some of the strata in the limerock quarried near Monroe, (which holds the lowest place in the limerock series described,)

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may be tolerably well adapted for a *hydraulic lime.* Should this conclusion be verified by trial in a larger way, this stone will prove of very great importance to the State. For this purpose, the dark blue, and the vesiculated or oolitic strata will probably be found best adapted, and in making the experiment, these should be separated and admitted into the kiln without intermixture of other portions.

Ornamental limestone.—Some of the strata at these quarries, are of dark color, and finely veined like marble; they receive a good polish, and were the beauty of the material better known, would, no doubt, be extensively used for chimney slabs and other ornamental purposes.

Sand for Glass.—I would again refer to the singular purity and value of the bed of white sand, occasioned by the disintegration of the very friable, siliceous limestone which is included in the intermediate portion of this series of limerocks, and which has been noticed in former reports. This bed is mostly pure silex, and under the microscope, will be seen to consist of perfect quartz crystals, free from any foreign or coloring materials. No sand in the State is so well adapted to the manufacture of glass, and for this purpose it may well be considered unrivalled. Viewing the wants of the State, in this respect, and the eligible situation of this material, six miles from the city of Monroe, this subject is strongly recommended to the enterprise of our citizens.

II.—KIDNEY IRON FORMATION.

In passing west from Monroe county, no rock is met with through the whole of Lenawee, it being completely overlaid and concealed by diluvium, and those thick beds of clay, which in part cover the rock in Monroe county, and over nearly the whole of Wayne, to a depth of more than 100 feet. These blue and yellow clays are presumed to be analagous to those which cover the limerock of the adjoining States, and which have been designated by Dr. Hildreth, of Ohio, as "semi-tertiary deposits." They are found almost universally to envelope the limerock in this State, as far as to the commencement of the sandstone series. The great accumulation of all these several deposits may be conceived, when it is stated that a rise of 200 feet is attained, after leaving the limerock in Monroe county, before rock in place is again discoverable.

The clay of the kidney iron formation, is first met with at the very southern extremity of the coal basin, in Hillsdale county, town seven

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south, range four west. Following thence along the western border of the carboniferous series, the formation is to be found occasionally over limited areas, through towns six and seven south, range four west, Hillsdale county, and towns six south, range five and six west, and towns five south, range six and seven west, Branch county. In the former county it is found in close proximity to the overlying sandstone, but in the latter with a considerable interval between, and generally in limited bodies, which appear to be but relics *left in place*, after the destruction and removal of the greater part of the formation.

The ore consists of nodular masses, formed of concentric coats or layers of iron, combined with lime and alumine, and surrounding a hard nucleus which frequently contains fossils. These masses are often of many pounds weight. They are imbedded in a gray, micaceous clay, of very fine grain, and frequently so hard as to have the appearance of compact sandrock. They are in general arranged in strata, alternating with the beds of clay, but are often found dispersed through the mass. This ore is analagous to that which is worked exxtensively, and with profit, in Ohio.

The clay is very free from lime, and of even texture. It is in consequence, admirably adopted to all purposes of the kiln or pottery, and is far superior to any found elsewhere in the State.

As a portion of this formation, in Branch county, was made the subject of a special examination, in accordance with an act of the Legislature of last winter, it will be unnecessary for me to add any thing to those practical considerations which will be as fully exhibited by you, as their importance demands.

No means were presented for ascertaining the thickness of this formation. At the village of Branch, it has been penetrated in a well, twenty-three feet.

III.—FOSSILIFEROUS, FERRUGINOUS SANDSTONES.

Next overlying the clay and ironstone, in Hillsdale county, succeeds a series of ferruginous sandstones, containing numerous marine fossils. Though classed in the so called "carboniferous formation," these all occupy a position below the lowest of the coal beds, and a short distance below their associated sandrocks, which present impressions of plants of the carboniferous era.

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The following table will exhibit the order and succession of the several strata, so far as could be determined, in descending order.

Succession of Rock Strata, in Hillsdale county, occupying the Southern border of the Coal Basin of Michigan, below the Coal Beds.

		Thickness
1.	*Coarse, quartzose, yellowish gray* sandrock; occupying elevated sides of knolls. A good material for grindstones,	30 feet.
2.	*Ash colored or brown* sandrock, sometimes contains fossils,	15 "
3.	*Dingy green, fine grained*, strata. Occasional fossils, and with yellow ferruginous spots,	40 "
4.	Hard gray stratum of sand rockrock, 6 inches to	1 foot.
5.	*Dingy green*, fine grained, interstratified with slaty sandstone, and apparently with blue clay shale, 15 to	20 feet.
6.	*Yellow, fossiliferous* sandrock. Abounds in marine fossils,	20 "
7.	*Green*, fine grained, sand rock; perhaps	10 "
8.	Clay and ironstone,	

The stratum designated as *yellow, fossiliferous*, is remarkably well characterized, being almost a perfect congeries of fossils. The whole is of a deep brownish yellow, and sometimes a buff color. The same stratum is met with, as appears by the notes of Mr. Douglass, in tracing down the western side of the basin, in the banks of Kalamazoo river, in Calhoun county, and at a level two hundred feet lower than the same rock in Hillsdale. This difference in level, shows a dip northerly not exceeding six minutes of a degree. But this result may be considered as less than the actual amount, from the fact of the two points not being in the true direction of the dip.

No stratum precisely analagous to this has been mentioned in the reports on the corresponding formations of the adjoining States.

By reference to the general topography of the State, it will be seen that the extreme southern termination of the sandstone series, has an elevation several hundred feet higher than any other part of the basin yet examined. This may account for the superior thickness and inclination of the rocks at this point, and for the circumstance of the clay and ironstone making its outcrop here. In consequence of the greater uplift at this point, several of the series are brought to the surface, which elsewhere are entirely concealed, owing to their more nearly horizontal position.

Most of the sandstones have been used for ordinary building purposes. The coarse grained rock (No. 1) is usually found eligibly situated for quarrying, and is well adapted both for building and grind-

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stones. Ledges of this rock occur in the town of Somerset, section seven, and Moscow, section twenty-nine, and are numerous through the southern part of Jackson County.

The included stratum, No. 4, (which is reached in general only in wells,) owing to its superior hardness, serves admirably for the above purpose.

The whole thickness of the sandstones, below the lowest of the beds, which embrace coal plants, will be found to exceed one hundred and sixty feet.

IV.—TERTIARY AND DILUVIAL DEPOSITS.

It has been already remarked, that in general, all the rocks are covered with a mantle of clays, fine detritus of the lime and sandrocks, or loose water worn fragments of still older rocks, swept from the north by the currents of a universal ocean, and deposited during the general subsidence.

Some evidences of the direction of these currents were noticed in my Report of last year. Among these are the diluvial furrows and scratches on the surface of the limerock, the appearance and direction of which correspond with observations made in some of the more eastern States.

The extensive deposits of blue and yellow gravelly clays, which immediately cover the limerock in Wayne and Monroe Counties, were found also to occupy the whole of the eastern slope of the Peninsula. Except in the border Counties, these are overlaid by sand and gravel, to a depth, probably, often exceeding one hundred feet.

A corresponding clay was found bordering Lake Michigan, through Berrien County, and is said to reach far out into the Lake at its southern extremity.

Pertaining to, or associated with these universal deposits, are beds of clay, erratic masses of primary, transition and secondary rocks, and the more recent formations of marl, tufa, peat, and bog-iron ore. To these I shall devote some separate practical considerations.

CLAYS.

The extensive blue and yellow clays which next overlie the limerock, are in general very gravelly, and contain also a large proportion of carbonate of lime; the blue in particular, effervescing strongly in

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acid. It is therefore not well adapted for the kiln. The upper, yellow, or brown clay, is the least marly, and is better suited to brick manufacture. The beds are often stratified, and portions may be found more nearly free from this injurious ingredient.

The presence of carbonate of lime may be detected by dropping a small bit of the clay into an acid, (strong vinegar will answer,) when, *if the clay be marly*, effervescence ensues, occasioned by the decomposition of the carbonate of lime, and escape of the carbonic acid, which is always combined with the lime. In this way, it will often be easy to distinguish such portions of a bed as do not contain lime in sufficient quantity, to impair their fitness for ordinary purposes.

Beds of clay, of a few feet thickness, often found alternating with strata of gravel and sand among the diluvium, and similar beds, occupying acres of limited extent on the surface, are frequent in the sandy soils of the openings. The latter seldom exceed a few acres in extent, and generally are of much smaller dimensions, with a thickness rarely exceeding four feet.

These isolated beds of clay are almost universally free from any injurious proportion of lime. In this particular, they are superior to the clays above mentioned, for making a durable brick. These beds are, however, very silicious, and indeed, partake of all the intermediate conditions, from a stiff clay to merely an agglutinated sand. Proper precautions are not always observed in this particular; for notwithstanding that sand often constitutes by far the largest constituent, an additional supply is not uncommonly added in the process of manufacture, almost to the total destruction of the adhesive property of the material. I may here observe, that in general these surface beds contain, without artificial mixture, sufficient sand to subserve their purpose in the manufacture of bricks.

ERRATIC, FRAGMENTARY ROCKS.

Boulders of the primary rocks are found in great numbers, lodged upon the more elevated and broken parts of the country, and imbedded in the diluvial gravels. They comprise a great variety of granites, quartz and hornblende. The hilly region of Ann Arbor affords a fine locality for procuring a set of almost every variety found in the State.

Large fragments of limestone are occasionally to be met with, which have been disruptured from the transition and carboniferous limerocks

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of the Peninsula. The largest masses of these were found near the summit of the great dividing ridge, on its eastern declivity. Several masses in the town of Somerset, Hillsdale county, are of such extent as to be easily mistaken for rock *in place;* portions only, being visible from beneath the imbedding diluvium. I became convinced, however, by the associated fossils, that they belong to an older formation than the carboniferous rocks of the vicinity.

Boulders of this rock are so numerous in some parts of the country as to afford almost the supply of lime needed for the district.

Masses of native copper, some of several pounds weight, have been found in Berrien and Cass counties, as also in the Valley of Grand River, and in several other portions of the State. These belong also, to the "erratic group," and are no evidence of the existence of the ore in their immediate vicinity.

The same remark will apply to the pieces of bituminous coal found very generally, through certain districts, imbedded in the diluvium. Though they may be found at various depths and in considerable quantities, no prospect can hence be inferred of finding coal beds in any of the counties embraced in this report.

SPRINGS AND UNDERGROUND WATER-COURSES.

The character of the diluvial strata is so varied over different districts, and the formation of surface so diversified, (which might give origin to springs under every variety of circumstances,) that it is impossible to establish any general rule governing the depth and directions of underground water-courses.

Water from the diluvial deposits is usually obtained in strata of quicksand or gravel, at varying depths. But after ascertaining the general characteristics of the surrounding country, some judgment may be formed over particular districts.

A stratum of quicksand producing water, is very generally found immediately overlying the clay deposits. In the blue clay, at the depth of twelve to twenty feet, a stratum of gravel, yielding a supply of water, appears to be almost universal.

Owing to the calcareous matter contained in the diluvial gravels and sands, as well as in the clays, the water of wells is commonly "hard."

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RECENT FORMATIONS.—CONGLOMERATE.

In the county of Berrien some very extensive formations of this singular rock occur. They are of recent origin, compared with all the other rocks, and both in age and formation, may be classed with the marls and tufas. A stratum of gravel, cemented with lime, appears to be very universal throughout this county, at depth of a few feet, and extensive masses, strongly cemented, are frequently found exposed in the faces of ravines and banks of streams, appearing like ledges of rock in place.

At Millburg, eight miles east of St. Joseph, a rock of this description was traced along the bank of Blue Creek, for half a mile. In appearance, it is a continuous ledge of very hard sandrock, varying in thickness from ten to fifteen feet. It consists of coarse sand, cemented by the infiltration of carbonate of lime, unbroken by seams, and which has become exceedingly hard on exposure. It may be quarried by blasting, in blocks of any required dimensions, dresses with facility, and will answer admirably for many economical purposes.

About two miles north-east of Berrien, this rock was seen under similar circumstances, in the bank of a small creek, forming an outcropping ledge, exceeding eight feet in thickness. It is found also at several points higher up the stream, and in the sides of hills in the vicinity. Portions of this ledge are of finer grain than that at Millburg, having a stratified appearance, and are disposed to cleave horizontally. Blocks have been removed and used for fire-jambs; in which capacity they have stood the test of two years service.

Similar formations occur in town three north, eight west, section twenty-four, in town of Oronoko, at Singer's Lake, and in the deep ravines east of New Buffalo. At the latter places the rock bears more the appearance of crag, being composed mostly of coarse pebbles.

The conglomerate, at all these places, is in isolated masses, of local origin, and probably does not extend many feet into the hill-sides. Quarries will therefore eventually be found to *run out.*

"Hard pans," which may be referred to a similar origin, are not uncommon among the diluvial strata even at considerable depths. The cementing material is not unfrequently, in part, a carbonate or hydrate of iron.

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A hard pan, of which the cement is no doubt lime, is found to be an almost universal sub-stratum to the rich loam of the prairies. To it the fertility of those soils may, in a great measure, be ascribed, since it serves to reatin the moisture which would be quickly swallowed by the porous sands.

Possibly this fact may aid in illustrating the origin, as well as the fertility, of the prairies. This sub-stratum is not commonly met with in the openings.

MARL, OR BOG-LIME, AND TUFA.

That variety of the mineral which is here designated by the name of *marl*, is chiefly a *carbonate of lime*, or lime combined with carbonic acid. It is frequently argillaceous, and mixed with earthy and carbonaceous matters. Throughout the counties enumerated, this mineral is found only in connection with the gravels, sands and clays which overlie the rocks, and may be defined as an alluvial deposit from waters which have percolated soils charged with lime. On reaching the surface the water parts with a portion of its carbonic acid, and becomes no longer capable of holding the lime in solution, which is then deposited in the form of a pulverulent, chalky substance, in the beds of lakes, or beneath the peat of marshes.

As carbonate of lime is a constituent of the covering of moluscous animals, these circumstances are favorable to the collection of great numbers of shells, so that these not unfrequently constitute even the main portion of the bed itself which may then receive the name of "*shell marl.*"

That form of lime which is called *tufa*, has a similar origin. It differs in external character, being hard, light and porous, and is that which is familiarly known as "*honey-comb lime.*" This characteristic difference is the result of circumstances, not of composition. Tufa is formed in situations which allow access of air, when a strong union of the particles takes place. Marl being always deposited under water, or beneath the peat of bogs, the surrounding fluid prevents cohesion. This condition is that which is very commonly designated as "*bog-lime.*"

Thus, according to circumstances, we find a variety of forms assumed by these deposits, from a "tufaceous marl," in which the particles have but partially cohered, to a hard "tufa," or *travertin rock*, appearing as ledges in exposed hill-sides.

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All these recent fresh water limes exist in great abundance in most of the counties enumerated, as well as throughout the interior of the State. In the northern part of Hillsdale, and the counties of Washtenaw and Oakland, in particular, so extensive and universally distributed are the beds of this useful mineral, that an attempt to ascertain and enumerate all the places in which it exists, is unnecessary if not impossible.

But notwithstanding its wide distribution, the uses, and even the existence of this mineral, are so little known or heeded, even by those who have most reason to appreciate its value, that I shall adventure some remarks upon its application to practical purposes, and the method of ascertaining its presence.

For making quick lime, the value of marl and tufa is already appreciated in those parts of our State which, like the counties under review, are nearly destitute of limerock. Consequently these have supplied the deficiency, and been applied to all the purposes of the best rock lime.

Though somewhat inferior in strength, the lime thus obtained is even preferred for particular purposes. It is said, for instance, to be preferable as a wash, owing to its superior whiteness. Its real value is frequently underrated from its not being sufficiently burned; marl being erroneously supposed to require a less degree of heat than limestone.

Some of the largest deposits of tufa I have met with, are formed along the banks of the Huron valley, between Ypsilanti and Dexter, at several of which, large quantities of lime are manufactured.

The circumstances which may give rise to the formation of either tufa or shell-marl, where the same source of supply exists, is here finely exemplified. Ledges of tufa occupy the elevated side of the valley, while copious springs discharging from its foot, occasion a peat morass between it and the river, beneath which is a body of soft marl several feet in thickness.

Impressions of leaves and branches of trees, and even bones of animals, are numerous in some portions of the tufa, these substances having evidently served as *nuclei*, around which the particles of lime were deposited from the water of the springs; thus, both giving an interesting character to the bed, and illustrating its formation.

The use of marl in agriculture is little appreciated, and may even be said to be wholly unknown to the great body of the farmers of our

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State. Hitherto, so small has been the demand for stimulant manures, by soils that have been for a few years only in the service of agriculture, that few farmers have brought themselves to reflect, whether, before many years, the new soils they have adopted, may not be like the old ones they have forsaken.

But, although many of our soils are even found to improve under the first few years of cultivation, they must eventually wear out, under a process, which gives no returns for the demands made upon them. This result is already becoming perceptible upon the older farms, and their cultivators are brought to the necessity of husbanding manures, to renovate their exhausted soils. Considerable quantities of gypsum (plaster) are annually imported and used, with most obvious success, upon soils that have not been half a dozen years under cultivation.

Gypsum and marl are constituted of the same basis, *lime*, under different states of combination: *sulphate of lime*, (sulphuric acid and lime,) composing the former; *carbonic acid and lime* composing marl and the other carbonates. The sulphate, possessing greater stimulant properties, has a somewhat different and more speedy operation, but it is doubtful whether its effect be either so decided or so lasting as that of marl, if applied in the required proportion. I have to regret the inability to institute such a comparison of their several operations upon our soils, as could be desired, having been unable to learn of a single instance of a fair trial of marl in the State. Notwithstanding, I do not hesitate to urge its use with full confidence, upon all who can be persuaded to make use of so simple a means to sustain their soils.

Besides the stimulant property, common both to gypsum and the carbonate of lime, in giving increased activity to vegetation, the lime effects a change in the character of the soil itself. No soil can be considered perfect without a large proportion. Lime enters largely into the composition of many crops; such as wheat, which it is well known, vegetates most vigorously where this abounds, as in many of the gravel and limestone soils. While a farther advantage results from the decomposition of the marl, in consequence of the separation of the animal matter, contained in the shelly portions of it. In short, gypsum can hardly be productive of benefit where marl might not be profitably applied. Add to this, what comes home to the reason of every farmer, that while he must pay for imported plaster, at the average rate of $20 per ton, the marl may be had for digging.

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Nature, ever bountiful, has indeed laid up in those marshes and ponds which seem, at first appearance, almost valueless, a provision of incalculable worth for her future maintainance. It may well be considered an untold treasure, stored close at hand, costing little to procure, requiring no preparation of grinding or burning, and which will be resorted to for years to come, to sustain and replenish the fertility of our soils. In applying this manure, we do but restore to the soil that with which it was originally endowed, since the soils themselves supplied the material of the marl beds. These seem left by Nature for future restoration, by the art of man, and apparently with design, are deposited in greatest abundance in the vicinity of those silicious soils upon which they will be most needed.

If even the enormous price paid for plaster is never regretted, most certainly I may be allowed to urge the simple experiment of giving a fair trial to so cheap an article as the marl. By such actual experiment, every man for himself, will best learn the proportions which his soils need, as well as the comparative results. Trial will, at least, furnish a satisfactory test of the truth; and we feel the more inclined to urge it, from the fact, that if successful, nothing in the whole range of agricultural economy, will exhibit more strongly the policy of availing ourselves of our native resources.

After this recommendation of marl, it may be expected that I advise under what circumstances to look for it. Marl is frequently to be recognized by its light ash color, about the margin, and occupying the shallows of lakes. In general, the marl which is most easily obtainable, will be found overlaid by peat, or muck of the marshes, often at a depth of several feet. Sometimes its presence, under these circumstances, is indicated by a slight coating of lime, visible upon the vegetation on the surface. The growth of the marl bed often causes the overlying bog to swell up into a protuberant form. But such indications are not always visible, and then, trial may be made, by thrusting down a pole or rod through the peat, when sufficient of the marl, if there be any, will adhere, usually, to make known its presence.

Every farmer ought to examine well his marshes, with this view, and if there is reason to believe marl exists there, to test the question fully, by digging.

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It may be advisable to raise the marl in the fall, and subject it to the action of the winter's frost, in order to bring it to a pulverized state previous to use upon the land.

PEAT.

This combustible is found in very great abundance in most of the marshes. It is that which supports the luxuriant crop of grasses they afford, and is itself a mass of grass roots and half decomposed vegetation. This variety of peat is called *fibrous*. It is so universally distributed, and in such quantity, that my notice of it will be in general terms.

Most of the beds of peat, in this State, are comparatively shallow, seldom exceeding four feet in thickness, and they in general want that compactness which is esteemed a requisite in the peats adapted for fuel. I shall, therefore, allude only to its value and application *as a manure.*

Few soils will endure many years continued cultivation, without requiring to be replenished, not altogether with mineral manures, such as gypsum and marls, but with those vegetable or animal products which afford the real sustenance to its crops. The time will just as surely come when the soils of our own State, though now fresh and unexhausted, will need the same support. The farmer will then rejoice at the opportunity to procure manures of this description; and I do not hesitate to say that *peat* will then rank among the most prominent, as it is now the most abundant.

Peat being almost wholly a mass of vegetable matter, affords precisely that which is yielded by the most fertilizing manures. But as found, it is in a more or less undecomposed state, and consequently not in that condition in which alone plants can receive it, to be absorbed into their substance. Should it be spread, as manure is often applied, its dry, spongy fibres, will not readily become converted into that soluble matter which is required by the conditions of vegetable organization. To exact its full benefit, then, some art seems necessary. In the absence of actual experiment, such as would most properly determine the mode of its application, I shall only suggest the simplest means. The compost-heap affords the readiest process for effecting those chemical changes which are necessary to convert peat into nutriment for vegetation. This will be facilitated by an intimate mixture of animal and

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other refuse matters, and of marl or lime. With the latter, the vegetable substance of peat enters into new combinations, forming certain soluble salts, which are then ready to be taken up as food by plants.

We have already seen how frequently peat and marl are found in connection, and in what abundance the latter may be procured. In peat and marl combined, we have, therefore, all that could be required, to make of those numerous marshes which intersect the country, immense receptacles of vegetable nutriment. The lime performs to the mass of raw organic matter of the peat, the office which the cook does to the larder. Conjoined, they furnish both provision for the nourishment of plants, and the means for preparing it.

Some contrariety of opinion exists on the use of calcareous manures, (gypsum and limes,) from the supposition that they eventually wear out the land, leaving it poorer than before. Now such a result may happen from either of two causes, neither of which implies any injurious quality in the mineral:

1st. From the too excessive use of this manure, or its application to soils, the composition of which was not understood, and where lime may already have formed an abundant element.

2d. From the use of mineral manures solely, under the mistaken supposition that they furnish the necessary nutriment to vegetation. Now, as has just been shown, these chiefly serve to prepare the food which has been furnished from other sources. So far from supplying the place of vegetable and animal manures, they only render necessary fresh supplies of the latter. By giving increased activity to vegetation, they of course cause a quicker consumption of the fertilizing principles. It will thus very easily be seen from what mistaken practice this "impoverishing of the soil," by the use of mineral manures, results, and also where may be found the proper corrective.

BOG IRON ORE, AND OCHRE.

All our bog ores are a product of the diluvial or alluvial deposits, the mineral being originally contained in the ferruginous sands or clays. It is taken up in solution by rain-waters, and afterwards, like the marls, deposited in low grounds.

Sands highly ferruginous, and beds of sandy *ochre*, of a bright red or yellow color, are not uncommon, though in general of small extent. Some considerable beds were observed in Lenawee county, ranged along

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the east side of the *ridge* or beach of the former lake, (which will be hereafter noticed,) and in the same manner as we often find iron sand washed up and deposited by the waves. A little west of Palmyra, one of these deposits stretches along the beach ridge for half a mile, having a width of a few rods, and a thickness of eighteen inches.

After much fruitless examination during the past season, I became convinced that no formations of ore exist in the counties examined which will compare in extent with those from which iron is manufactured in Indiana, near the border of this State. Beds of it, indeed, occur, some of which may be considered as of practical value.

Although the kidney ironstone makes its appearance at several points, which might have been deemed favorable to the depositing of a bog ore, resulting from the mineral in those beds, none was found associated with it. I was led to search for bog iron in this vicinity, more particularly from the circumstance that a mixture of the two forms of ore is usually made at the kidney ore furnaces, in order to facilitate smelting. Some deposits of bog iron in the southern part of Branch county, in fractional town of Algansee, are of sufficient extent to be valuable for this purpose, should a furnace be established at the kidney ore beds of that county. One of these deposits was traced over more than an acre.

Along St. Joseph River, in St. Joseph county, small beds of ore and ferruginous sands were found, and also in town five north, range ten west, section nine. These are mentioned, as they may be of value from their vicinity to the beds of kidney iron in this part of the State. But should it be ascertained that the chief benefit of a mixture of the two ores results from the carbonate of lime supplied by the former, the *marl beds*, which abound throughout this district, will furnish a ready and cheap flux to facilitate the operations.

The most considerable beds of bog iron ascertained during the past season, were in Oakland county. The following are worthy of notice:

In town of Lyon, section thirty, a good lively ore is found, occupying in the whole several acres.

Town of Orion, section twenty-four, deposits were traced at intervals over an extent of twenty acres. The richest and most abundant form of the ore was in the state of a yellow ochre.

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In town of Groveland, numerous beds of ochre are collected around the heads of Duck Creek, and are frequently over an area of half a square mile.

In Washtenaw county, bog ore has been found at several places in town of Augusta, and considerable beds of red ochre in town of Sharon.

The ochres may serve a very good purpose as an ordinary red or yellow paint. This may be obtained in a cheap manner, thus: stir the sand in water, then after allowing a few minutes for the siliceous grains to settle, pour off the liquid and obtain the colored sediment which is held in suspension.

ANCIENT LAKE RIDGE.

At about twenty-five miles inland from the shore of Lake Erie, and following a nearly parallel course to the lake and Detroit River, a low gravelly ridge may be traced, corresponding in its character to that upon which the celebrated "ridge road" runs, along the southern shore of Lake Ontario. Except where broken through by streams, this ridge is very continuous, and of nearly uniform size; so much so indeed, that I have been able, without difficulty, to distinguish it from all ordinary undulations of surface at whatever point it has met my observation, and to trace its course for more than sixty miles.

The ridge has a breadth of several hundred feet, and rises with a gentle curve into a somewhat conical form, to the average height of about twelve or fifteen feet above the flat lands on the lake side. It is composed of layers of coarse and fine gravel and beach sand, reposing upon the clays, which constitute the sub-soil of the contiguous country.

From its resemblance to the beaches bounding the waters of the present lake, as well as from the relative character of the country on either side, no doubt remains in my mind that this ridge once constituted the boundary of an immense expanse of water, which became afterwards circumscribed to the dimensions of the present lakes.

The ascent of the land on the lower or lake side, is much more gradual and uniform than on the upper, and the "ridge" may be said to form here a boundary to that belt of level country which borders the Peninsula. This belt of land, as already described, is mostly clothed with a dense growth of timber, and a dividing line drawn between this and the

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light growth of the sandy openings very nearly corresponds with the course of the ridge.

The elevation of the ridge, its uniformity, and the gravel of which it is composed, admirably adapt it for a highway. Roads have consequently been run upon it through a large part of its course in Wayne county, bearing northeast and southwest, from the village of Plymouth, and also through town of York, in Washtenaw county, to Ridgeway, in Lenawee.

Divergences sometimes occur in this ridge, like those described by Mr. Hall, in the Geological Report of New York, for 1838, and the branches again unite; or, after being diverted by the valleys of entering streams, it again resumes its former general parallelism to the present shore of the lake.

The State Topographer of Ohio, Col. Whittlesy, mentions the fact of a "succession of low, gentle undulations, like a broad turnpike or wave, running parallel to the shore" of Lake Erie, in that State. He says they vary in number from one to three, and are distant from the shore from half a mile to five miles, and he supposes they differ in height from ninety to one hundred and twenty feet above the lake.

"External appearances," he remarks, "certainly indicate that the waters of Lake Erie once stood a hundred feet higher than at present; but there is not as yet, evidence enough to decide this interesting question. It would be difficult to find natural barriers for a sea which should have elevated itself to that height."

From a series of levels, taken during the surveys of the public works of Michigan, I have ascertained the ridge to have here a uniform elevation of one hundred and seven or one hundred and eight feet above Lake Erie, which, it will be perceived, agrees nearly with the estimate of Mr. Whittlesy. The uniformity of this elevation furnishes an additional proof of its having once been coincident with the level of the lake waters.

The proofs of a former submergence of this whole country, are so abundant that the general fact seems well established. It is also plain, that this ridge could not have been formed during that turbulent state of waters which brought upon the rock-covered surface of the country its immense deposit of diluvium, but must have resulted from a quiescent state of the waters.

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Let us then, for a moment, consider "this interesting question" solved, and proceed to inquire how far the results to which we are brought by the supposed elevation of the lake waters one hundred and seven feet above the present level of Lake Erie, accords with repeated observations made throughout the lake region. Supposing the characteristics of the land to have been relatively the same as now, the great lakes, which at present are but links of a connecting chain, would become merged in one immense irregular sea; their breadth being increased many miles on either side, while their connecting bands are lost in the wide expanse. The northern part of our Peninsula becomes an island, or separated by only a narrow neck across a wide frith, following the valleys of the Saginaw and Grand Rivers. The western and eastern tier of counties are flooded, and the Maumee country as far as Fort Wayne. West of Lake Michigan, the spread of the waters is still wider; embracing, perhaps, with the exception of some islands, more than half of Wisconsin, and the whole of the immensely broad valleys of the Illinois, Ohio and Mississippi rivers. Upper Canada assumes the form of an island in the wide spread waste. The roar of Niagara is drowned beneath the rolling billows of a broad and deep inland ocean, having a breadth at this point of more than sixty miles. While, stretching off to the east, the waters involve a great share of Lower Canada, the whole of the Genessee country of New York, with most of its chain of lakes, and a communication is made with the ocean, both by way of the St. Lawrence, and the valley of the Mohawk.

It will be apparent, then, that the great "basin of the St. Lawrence," within which all the present basins of the lakes are included, as well as the immensely broad and fertile "valleys of the Mississippi," become one continuous sea, in which whatever of the present land remains, are as islands in the deep.

The difficulties which oppose this supposition are, the almost unlimited supply of water required to furnish a basin of such extent, and the want of barriers to confine its discharge into the ocean. But one theory presents itself, competent to solve difficulties of such magnitude. The supply of water must have come from the ocean itself. Consequently, the surrounding and interior seas, must have had the same level and the greater elevation of the lakes relatively, to the surrounding land, was the result, not of their increased actual elevation, but of the

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actual diminished elevation of the land itself. In other words, the land has been subsequently subjected to an upheaving force, which at last has elevated the whole far above the influence of the sea.

Whether the upheaving of the land was general at this era, throughout the continent, or was mainly operative in the region of the lakes, probably cannot be satisfactorily determined. It may be competent, however, to suppose that these apparent "lake ridges" were the boundaries of the ancient sea, formed during intervals of rest in the upward tendency of the land. The comparatively quiet state of the elements, and the greater length of time for which the waters covered the extent described, will satisfactorily account for the uniformity of surface which characterizes the country bordering on the present lakes, and those vast plains of the west, which were subjected to the same influencing circumstances.

There are, however, some reasons for concluding that a part, at least, of this area, was occupied by fresh water, and to this supposition we shall advert hereafter.

There also exist strong reasons for supposing that the relative levels of the land did not everywhere remain the same, or that disproportionate elevations took place. Thus, appearances warrant the suppostion that at several points barriers existed to that free communication which I have assumed, of the water of this inland sea with the Atlantic. If we suppose the great Appalachian range of mountains, at any of the points where it meets the St. Lawrence, to have once formed a barrier to that river, a communication through from the ocean in that direction, would have been cut off. The "Up Lifts," at Little Falls, which rise 147 feet higher than Lake Erie, and the "Highlands" of the Hudson might also have interposed barriers to an outlet across the State of New York. A single communication only would then exist with the ocean, viz: through the valley of the Mississippi. That the lakes once discharged their waters in this direction, such additional evidence is furnished by the appearance of the country, that in this our argument but serves to add confirmation to the general opinion.

There is further reason to suppose that a barrier has existed across the Strait of Mackinac, cutting off Lake Michigan, and perhaps Lake Superior, from the lower lakes. Now, if we supposed that the erection

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of this barrier, or the continuance of the elevatory movement, closed up the communication by way of the Mississippi Valley, a body of water would remain, filling nearly the whole "basin of the St. Lawrence," and receiving constant accessions from the streams which discharge into it.

At this period, we may conclude, the rocky barriers of the Mohawk and Hudson, unable to resist the enormous pressure of the accumulating volume, gave way, discharging the surplus waters with tremendous violence, and thus opening a passage for the present great channels of water communication with the ocean, through the State of New York.

Subsequent to this event, the continued uplifting of the land, or the bursting of the barrier of the Alleghanies, opened a passage for the waters through their present outlet of the St. Lawrence, when Lake Erie and the upper lakes subsided to about their present levels. Then, for the first time, their accumulated waters, confined by the valley of the Niagara, rushed over its "wave-worn precipice," producing that stupendous cataract, which now seems likely, for ages, to emit its unceasing thunders.

The "lake-ridge," of New York, may be considered as the shore of Ontario, after this parting of the lakes had taken place, and must necessarily be of subsequent formation to those of Lake Erie. A still further progress of the elevation afterwards, alone, would reduce that lake to its present level, without affecting the levels of the upper lakes.

It is not our design, nor would it come within the scope of this report, to discuss the prime cause of these great changes. We rest here on the assurance that it involves no principle which a geologist, at this day will deny. A fact is mentioned by Prof. Emmons, in the first Geological Report of New York, which has so immediate a bearing on the principle here made use of, that I cannot refrain from alluding to it. It is this—"That the waters of the St. Lawrence are declining, or do not appear at so high a level now as formerly; or, what is about the same thing, the country is rising." "The possibility of such a change," he justly remarks, "can no longer be doubted, since it is clearly proved that portions of the continent of Europe are now undergoing the same change. Norway is gradually rising, and Greenland is gradually sinking." Similar phenomena are also taking place on the west-

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ern coast of South America. Other facts relevant to this subject might be introduced, connected with the earthquakes in the Mississippi valley, had I not been already enticed to greater length than may seem called for in this place.

It may be added, that the unusually marked character of the ridge on the west end of Lake Erie, is a consequence of the even surface and extent of the limerock, and its overlying clays, which here form its base. It may be doubted whether any similar ridge, at least so distinct, may be traced over the more broken country which circumscribed the eastern limits of the waters in New York.

LAKE ALLUVION.

The facts and suppositions above stated, lead to several important conclusions, in determining the alluvial deposits of the Peninsula.

Under the name of diluvium, were classed all those alternating deposits of sands, gravels and clays, which envelope the upper rock formations of the Peninsula. As we descend from the more elevated interior, and come within that area which I have supposed circumscribed by the waters of the ancient lakes, a different character of surface, and of soil, prevails. The great deposit of blue and yellow clays, since they underlie and extend beyond the ridge, must be of a date anterior to the era under consideration. Nor do they seem to have been much disturbed during that comparatively quiet state of the waters. An evident disarrangement, however, took place among the more loose sands and gravels, which assumed the character of *alluvion;* being subjected to a less disturbed and longer continued action than the diluviums, and deposited with fewer inequalities of surface. This *alluvion* consists, in the main, of a covering of sand, or of sand ridges, with the underlying clays outcropping at intervals. Boulders are thinly dispersed, and few local beds of clay are found, like those embraced in the diluvium. Most of the alluvion is clothed with a dense growth of timber.

Similar results, from the same cause, are found strikingly exemplified in the State of New York, over an area described by Mr. Vanuxem, as occupying "a portion of Oneida, the northern part of Madison, Onondaga and Cayuga, and the western and southern portions of Oswego." The area included within these limits, will be found to correspond with that which I have supposed occupied by the waters when raised to the assumed level. "Were the whole of this ancient level or area," he

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adds, "stripped of its alluvial materials, we should find that the surface presented a lake bottom, appearing as though Ontario and Oneida once had a higher level, their waters uniting and covering the whole surface."

Very important practical conclusions are drawn by Mr. Vanuxem from these facts.

It is in this alluvion that we find buried, trunks of trees, the remains of the Mastodon, and fresh water shells, and I am not aware that any of these have been found, under similar circumstances, in the diluvial deposits.

Instances in our State, though rare, are all confirmatory of the position assumed. Bones of the Mastodon were two years since found on the Paw Paw River, in Berrien county, beneath twelve feet of sand and gravel. A few of these are preserved in the State collection. In the same manner, trees may be seen imbedded in the gravel which overlies the clays on St. Clair River, at the foot of Lake Huron, and at a depth of ten to twenty feet from the surface. The discovery of fresh-water shells, under similar conditions, has been made in Saginaw county, and elsewhere in this State, and in the Niagara valley, at a height far above the present stream.

We do not by any means consider these facts conclusive that this inland sea was one of fresh water, nor do we see much difficulty in the way of so important a conclusion. If such was the case, the barriers which cut off the influx of the ocean must have existed during the quiescent state of the waters. For had the present passages of the ocean been then opened, no such accumulation of fresh water could have taken place; but we must necessarily suppose the inland sea to have been at the same level with the briny Atlantic. Assuming our theory of the erection of these barriers, as proposed above, we may then conceive the uplifting of the continent to have been still in progress, until the whole became elevated far above the influence of the ocean, and could receive accessions only from fresh water streams.

In conclusion of this subject, the aspect of the surface throughout this region seems to indicate three great eras since the formation of the newest rocks:

1st. After the elevatory process had commenced, and land appeared above the surface of the ocean. At this period many of the secondary

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and tertiary rocks were removed by the agitation of the waters, and the whole covered with that mass of disruptured fragments of rocks of all ages, which constitute our *diluviums*.

2d. When the upheaving force became stationary, at long and successive intervals, or when the elevation of mountain ranges had erected barriers against the influx of the ocean. During this period lake *alluvions* would be forming over the area then occupied by the waters.

3d. The era of the present levels; which commence after the increasing pressure had burst passages successively through the opposing barriers, occasioning sudden subsidences of the waters.

Thus we may suppose that the lakes assumed their present forms in successive order, beginning with the most elevated, until finding their final passage through the St. Lawrence, the chain as now existing, became complete.

Thus, (whichever assumption be correct,) the "lake ridge" becomes a record of one of those great changes which the surface of the world has been ever undergoing, to fit for the habitation of man.

—

DETROIT, January 24, 1841.

To DOUGLASS HOUGHTON, *State Geologist:*

DEAR SIR—Immediately upon my return from the portion of our State bordering on Lake Superior, where my services as Assistant, had been required during a large part of the season, I re-commenced the detailed surveys in the organized counties of Michigan proper. These were conducted with a more especial view to the determination of the extent and value of the coal district of the Peninsula. The counties in which minute examinations have been made during the past season, are Barry, Clinton, Shiawassee, Genesee, Lapeer, St. Clair, and Macomb; and examinations have been extended generally over other counties previously examined, in part, in order to the more full and satisfactory completion of the duties assigned me.

MAPS OF THE COUNTIES.

The labor of correcting, while in the field, maps of those counties which were assigned to my Geological and Topographical supervision, has been completed, and the plats are now in the hands of the State Topographer, to be prepared for publication. A great mass of informa-

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tion, both of a practical and purely scientific character, and which could not be transferred to the maps, nor be suitably embodied in the annual reports, has been compiled from my field notes, arranged for future reference, and for such use as may be found advisable in the final report on the survey. Particular attention has been devoted towards the full collection of all such datails as would give a completeness to the several objects aimed at, in this department of the survey, and I may be permitted to say that no source of information known to me, has been neglected, which could subserve interests of so important and comprehensive a character.

PURPOSE OF PRESENT REPORT.

The Report of Mr. Douglass, of last year, embraced a general view of the extent of the coal bearing rocks, so far as then ascertained, and their details in the counties of Jackson, Ingham, and Eaton; my own having been confined to the rocks below the lowest of the coal bearing series. Without further recapitulation of the facts heretofore submitted, than may be unavoidable, I propose, in the present report, to exhibit a comprehensive view of all the rock formations, throughout the organized counties of the State.

The "Geological Section," hereto prefixed, will serve to exhibit at a glance, the succession of the rock formations, from the universally superimposed sands and gravels, down to the great limerock formation of the southern portion of the State, bordering on Lake Erie. It is intended to show the rocky basis which would be exhibited to view, if the country could be cleft through, in a line from Lake Erie to Maple river, in Clinton county. The rocks in this Section, are grouped according to their distinguishing characters and relative position, and each group is distinguished by an alphabetical letter. The sub-divisions of some of the groups, are given in the body of the report.

GENERAL GEOLOGY OF THE ORGANIZED COUNTIES OF MICHIGAN.

In the "Section" alluded to, the rocks embraced within the district under consideration, are divided into groups, as follows:

A. Erratic Block Group, or Diluviums. — a. Alluvions, ancient, recent.

B. Tertiary clays.

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C. Coal measures. { Upper coal and shales. / Lower coal and shale. / Included sandstones. / Limestone stratum.

D. Sub-carboniferous sandstones.

E. Clay and kidney-ironstone formation.

F. Sandstones, of Point aux Barques.

G. Argillaceous slates and flags, of Lake Huron.

H. Soft, light colored sandstones.

I. Black, aluminous slate.

K. Limerocks, of Lake Erie.

These will now be considered, as nearly as may be, in their consecutive order, beginning with the highest in the series.

ERRATIC BLOCK GROUP, OR DILUVIAL DEPOSITS.

These consist of sand, pebbles, and large water-worn masses of previously existing rocks, with occasional small, local beds of clay. They have a thickness varying from one to upwards of one hundred feet; they form a universal mantle to the rocks, and constitute the soils of all the interior counties.

As this whole deposit is one of transport by water, and is made up of the detritus and disruptured fragments of heterogeneous formations, its character depends upon that of the rocks from which it is derived. For instance, sand constitutes by far the greater proportion, and this circumstance may be, in part, accounted for, from the fact of the immense extent of sandstone rocks existing farther to the north; and in part, by the fact, further disclosed by the geological researches in the Peninsula, that an immense thickness of rocks, mostly sandstone, which composed the upper series of the coal measures, has been broken up and removed from our geological series. Fine *gravel* constitutes the diluvium in the next proportion, and is the result of a similar abrasion of rocks of harder materials. Owing to the friable nature of the sandstones, as might be expected, few large boulders of that material occur. Limestone pebbles and boulders are abundant; a condition which also might be looked for, when we take into view the immense extent and thickness of the limerocks of our State, they being by far the most prominent formation above the primary.

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These relations of the component parts of our diluviums, give a character to the *soils* of the Peninsula, which enables us to compare them most favorably with those of most other States of the Union. Though being very generally what may be denominated sandy or gravelly, and often answering in appearance to a description of soils which, in the Eastern States, are considered as absolutely barren, the variety and due intermixture of their components, and more particularly the large proportion of carbonate of lime which is combined with them, either in the form of pebbles, or in a very comminuted state, imparts to them unusual strength and fertility. The latter circumstance is that which so admirably adapts them to the growth of wheat, and in this respect, most of the soils of the Peninsula may fairly be pronounced unrivalled.

Whatever may have been the causes which swept these materials over the face of the rocks, whether oceanic currents, or bodies of floating ice, the character of these *diluviums*, as well as numerous accompanying facts, plainly imply that they came in a direction northerly from their present beds, and often from great distances. Consequently we find intermingled, as well as scattered upon the surface, numerous rounded fragments of those primary rocks which are known to exist in the Peninsula of Northern Michigan and in Canada, from the size of the largest "hard-heads" down to fine gravel. In proceeding from our State southerly, these deposits are found gradually to thin out, evincing a diminution of the sustaining power with the increased distance from the original bed of the transported materials. So that, while the Peninsula of Michigan has been most liberally supplied with an uncommonly deep and arable soil, made up of a variety of materials, the States of Ohio and Indiana, on the south, are in great part destitute, its place being supplied by the clays of the next lower formation.

The deposition of these materials took place with or without apparent order and uniformity, according to the character of the existing surface, and other circumstances which may have governed the transporting forces. From this cause considerable variations are to be found in the depth, nature, and composition of the diluviums, and hence, also, material differences are occasioned in the soils and other characteristics of the country. In many places a uniform stratification has taken place, as if the result of quiet deposition. This is more particularly apparent

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on the east and south side of the main ridge of the Peninsula, and may be considered as a natural consequence of so considerable an obstacle as this partial barrier must have interposed to the force of northerly currents. Here, wells have been carried to the depth of 90 feet, through beds of stratified gravel.

Throughout all the diluviums, thin local beds of clay are of frequent occurrence, and occasional strata of hard pan or cemented pebbles. These clays, unlike those of the tertiary, contain little or no lime.

Most of the country thus covered by the diluvial deposits, exhibits the action of strong currents and eddies, in a very striking manner. Districts of many miles extent, frequently present a continued and close succession of rolling knobs or cones of gravel, with deep intervening basins. The more ordinary character of surface is a gentle roll or slight undulation occasionally subsiding to a perfect plain.

Except where a deposit of clay underlies, the growth of timber is almost invariably scanty, constituting what are denominated "oak openings." The character of the timber changes with the varying conditions of the soil, from white and black oak, to burr oak or hickory, and the plains are frequently altogether destitute of timber. A dense growth of the usual hard wood timber sometimes occurs over isolated tracts, in swales, or along banks of streams. Of the character of country described, are found the three most southerly ranges of counties, with the exception of those which immediately border the Peninsula, on the great lakes, together with parts of the adjoining counties, and the counties of Ingham and Eaton. All the latter have a sub-stratum of clay, belonging to the great deposit to be presently described, and in consequence differ very materially in surface, soil, and timber.

To this extreme thickness and comparatively loose texture of the diluviums, may be ascribed the great abundance of springs, and consequently of the small streams which irrigate the whole surface of the State, affording abundance of that element so desirable to the farmer. An undulating surface gives to most of these a sufficiently rapid flow to preserve a healthy current and to furnish a sufficiency of mill power. From the same cause, also, little difficulty is experienced in obtaining pure water by sinking of wells, and it may safely be said that Michigan is better supplied with living water, uniformly distributed, than any other State in the Union.

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The vast number of small lakes, for which Michigan is so remarkable, are due to the same causes. They occupy generally, deep hollows, seemingly scooped out of the mass of diluvium, and are fed by the living springs that percolate through it. The number of these peninsular lakes is stated by the State Topographer, at not less than *three thousand;* being in proportion of one acre of water to every thirty-nine of dry land.

Another striking feature of the Peninsula landscape, is the number and extent of wet prairies or marsh. Of these the proportion is much larger than of the lakes, and they often cover many miles of surface. These have their origin also from springs, issuing from the diluvium; aided often, by the artificial dams of the beaver, and from being originally mere pools or shallow lakes, in time they become receptacles for beds of marl and peat. From the very tolerable hay which these prairies afford, and the very early supply of tender "feeding" for cattle in the spring, these apparently waste places have been an invaluable aid to the settlement of the country. The primitive settler came hither, not to a desert waste or a "howling wilderness," but to lands cleared without aid from the woodman's axe, and verdant with unsown crops. He did not wait to provide pasture, but brought his herds and flocks with him, and the marshes furnished them ample sustenance throughout the year. And we hazard nothing in saying that these marshes, waste as many of them are now suffered to be, are destined to become still more valuable in sustaining the failing vigor of the country whose youthful prosperity they promoted. Their successful drainage is no longer a matter of experiment. Scarcely a marsh of much extent exists, which is not capable of thorough drainage, with comparatively small expense, and when thus subdued, of furnishing a rich soil almost beyond comparison. The literally exhaustless beds of marl and peat, with which these marshes abound, constitute another item of value no less important. But the consideration of these may more properly be referred to the head of *Recent Alluvions.*

But though affording a medium for the absorption of rain waters and their percolation through strata of gravel or quicksand, the diluviums are rendered sufficiently retentive, by the alumine contained in them, and by seams of cemented gravel and sand. Were it not for this, the moisture absorbed by our light, sandy soils, would soon be drained off

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and lost to the crops. A sub-stratum of cemented gravel, retentive of water, is common to many, if not all the prairies, and to this circumstance may, no doubt, in a great measure, be ascribed their accumulation of rich loam, and consequent fertility.

Much curious inquiry has been excited on the question of the causes which produced the peculiar, varied and open character of so large a portion of our Peninsula. After the view which we have just taken of our diluviums, it may seem less a matter of surprise, that portions of the State should be adapted to the production of a dense growth of hard timber, and others only to the several species of oaks, or to hickory, according to the continually varying conditions of the soil, and its sub-strata. The existing analogies of the vegetable world, which exhibit similar results elsewhere, might lead us to infer these changes, and we may, without doubt, attribute to the peculiar characteristics of our diluvial envelop, and its varying conditions, the accompanying peculiarities in the features of the country, and the growth and character of its timber.

How far the impervious character of the "hard pan," which so generally, if not universally, forms the sub-stratum to the prairies and plains, may account for the destitution or sparse growth of large trees, we are not altogether prepared to decide, and therefore, avoid for the present, considerations, which at best, may be considered somewhat theoretical. Nor will we assume to decide, with confidence, upon the extent of the effects produced by the ravages of the annual fires which formerly swept over these tracts. It is but reasonable to conclude that all these, and perhaps other concomitant causes, have operated together in producing the results we witness, while, according to peculiar circumstances, one of these several causes, may have operated more or less powerfully than others.

ANCIENT ALLUVION.

As the consideration of that immense mass of materials, to which has been applied the name of diluviums, or *erratic block group*, was necessary, in order to a correct appreciation of those lesser deposits, now to be considered, (which are associated with, and in fact, compose a part of the former,) that important group claimed our first attention. We come now to the consideration of a class of deposits which may be called alluvial.

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Some interesting facts in relation to the assumption, that the waters of the great lakes were formerly at a much higher level than at present, covering a large part of the border portions of the Peninsula, were noticed in my report of last year. During the past season, a continuation of the "ridge," which is supposed to coincide with the beach of the ancient lake, has been traced through Macomb into St. Clair county; and further facts, confirmatory of the positions assumed last year, were observed in other more northerly districts. In the county of Macomb, this ridge has been much broken up by crossing streams, and is very irregular, showing frequently the existence of large entering bays and curvatures of the coast. This was the more particularly noticed, from the fact that elsewhere, so far as observed, the course of the ridge is very remarkably continuous and well defined. In this county, also, a number of inferior ridges of evidently similar origin, were observed, between the main one and the present lake shore; leading to the supposition, that the subsidence of the waters did not take place gradually and constantly, but that sudden lapses occurred, and the water line had been stationary at intervals.

The soil and detrital matter superficially covering that portion of the Peninsula which is embraced between this ancient lake ridge and the present shore of the lakes, I have denominated *ancient alluvion*, to distinguish them, as well from alluvions now in process of formation, as from the immense mass of *diluviums* which overspread the whole interior of the State, beyond this separating ridge.

The portion thus distinguished by alluvial deposits, embraces a broad belt of border country, varying in width from about 25 to 50 miles. It is, with small local exceptions, heavily timbered and very level. But, on passing the bounding ridge, there is in general, an almost immediate change to a soil of coarser character, and a more undulating surface. This ancient alluvion is a deposit, from a quiescent condition of the waters, and similar to that which is now taking place in the beds of the present lakes. It forms in general, but a thin mantle to the underlying formations, consisting often of mere ridges of sand, and owing to the deprivation of its lime, has, in general, less fertility than the diluviums.

The heavily timbered district is not altogether coincident with the extent of this alluvion, but is dependent chiefly upon the following cause: Throughout their whole extent, the alluvions are underlaid by

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the tertiary clays. These are a formation anterior to both the diluviums and alluvions, and are frequently found extending far beyond the old lake ridge. The country thus underlaid, is that which is almost wholly clothed with a dense growth of timber. This formation will be found described under the head of tertiary clays.

RECENT ALLUVIONS.

Under this head I shall here allude only to local beds of marl, bog ores, and peat.

Marl occurs in the greatest abundance, universally distributed throughout the diluvial district, and consists of local deposits, which originate solely from the lime so profusely contained in the diluviums. Such beds are in constant process of formation and increase, wherever that ingredient exists. As it is present in a much less degree in the ancient alluvion, no extensive beds are consequently found throughout the district occupied by the latter.

Bog iron ores are deposits, originating in a similar manner, from the iron contained in the soil, which is dissolved out by the rain waters and collects in low grounds.

Peat beds are exclusively of vegetable origin, and are common both to the alluvial and diluvial districts.

The character, abundance, and value of the marl, peat, and bog ore beds of our State, having been fully dwelt upon in the reports of last year, I shall make no further remarks upon their practical applications. I cannot avoid, nevertheless, once again directing the attention of the farmer of Michigan to the fact of the unexampled abundance in which the two former occur, conveniently distributed for universal use as a manure, and urging the use of them, as the cheapest, and in most cases, the best of mineral manures, and which will be found a very important means of improvement in his agricultural economy.

ORGANIC REMAINS.

Bones of the Mastodon were last year discovered in the ancient alluvion, in the western part of Macomb county. They were mostly so much decayed as not to bear exposure to the atmosphere, and a molar tooth only has been preserved. Similar relics were, several years ago, disinterred on the Paw Paw River, in Berrien county.

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There is now in possession of a gentleman in this city, a vertebral bone of enormous size, said to have been found, many years ago, upon the St. Joseph River, and which is pronounced by the State Zoologist, Dr. Sager, to be the caudal vertebra of a whale. It measures in vertical diameter, including spinous process, 18 inches; transverse diameter, including lateral processes, 2 feet; diameter of body, 11 inches; length of body 10½ inches; length of spinous process, 9 inches. Its weight is 21 lbs., which is probably less than one-half its original weight, as the bone is partially decayed.

TERTIARY CLAYS.

These extensive deposits belong to an era subsequent to the removal of the upper coal bearing rocks. They cover all the border counties on the east and west slopes of the Peninsula, and in some instances, stretch far inland. These clays extend over more than two-thirds of that part of the State which lies south of Saginaw, Maple, and Grand Rivers, embracing nearly the whole of the counties of Ottawa, Allegan, Van Buren, Berrien, Monroe, Wayne, Macomb, St. Clair, Sanilac, Huron, Tuscola, Saginaw, Lapeer, Clinton and Eaton, and a large portion of Ingham, Genesee, Shiawassee, Ionia, Kent, St. Joseph, Branch, Hillsdale and Lenawee. The remaining portions of the counties last named, and very nearly the whole of Oakland, Livingston, Washtenaw, Jackson, Calhoun, Kalamazoo and Cass, are destitute of the sub-clay formation, and the diluviums rest immediately upon the rocks.

A dense growth of timber almost invariably accompanies this formation, whatever may be the immediate soil. We find this observation applicable to large portions of Eaton, Ingham, Clinton, Shiawassee and Genesee counties, though these counties are based in part on the sandstone rocks of the coal series, and have sandy, diluvial soils; while the sandstone country south of them, presents little else than oak openings and plains.

These clays are an extension of the same formation which covers the western and northern portion of Ohio, and the east and north of Indiana, and which constitutes the soil of a large portion of those districts.

The upper portion is a gravelly yellowish clay, varying in thickness from one to fifteen feet, and having an average probably not exceeding five feet. Beneath this is a similar clay, of a blue color, and which in some places has been found to exceed in thickness one hundred and

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twenty feet. Both clays contain at least twenty per cent. by weight, of carbonate of lime, and this marly character injures them materially for the manfacture of bricks or pottery.

On the western slope of the Peninsula, the place of the yellow and blue clays is sometimes supplied by clay of a reddish color, of great thickness. No fossils have yet been discovered in any of the clays of this formation.

COAL MEASURES.

The rocks which include the coal beds of our State, occupy, comparatively but a small portion of that part of the State under consideration, and are embraced within the counties of Jackson, Calhoun, Ingham, Eaton, Kent, Ionia, Clinton, Shiawassee and Genesee. They consist of strata of sandstone, shale, coal and limestone. Covered as these rocks are, with thick deposits of diluviums and clays, they make outcrops at but few points, and the determination of their order and extent has been a matter of no small difficulty. From the dip of the rocks composing these measures, there can be little doubt that the coal basin extends northerly beyond the counties named, perhaps as far as to the head branches of the Tittabawassee and Maskego rivers. But that country is, as yet, almost wholly unsettled; and though partial explorations have been made through it, since the commencement of the geological surveys, the thick mass of overlying materials has hitherto prevented a determination of the northerly extent of these rocks.

LIMESTONE STRATUM.

As this stratum, from its position, (being the lowest in the series,) determines the extent of the rocks, considered as composing our coal basin, I shall, for the sake of greater precision, give to it the first consideration.

A gray limestone, in irregular, detached beds, is found along the extreme border of the coal-bearing sandstones. They are evidently relics, in place, of a thin but extensive stratum, and as no coal has been found below this rock, I have assumed it as the terminating rock of the "coal measures" proper of our State. Following this rock, as it makes its occasional appearance, the southerly limits of the coal basin may be traced by a line, drawn from the Shiawassee river, at Corunna, through the easterly part of Ingham and Jackson, between ranges one

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and two east, to near Napoleon, in the latter county. It then turns westerly through town three south, ranges one and two west; from whence, taking a direction north-westerly, it pursues an irregular line, passing through Bellevue, in the south-west corner of Eaton County, to Grand Rapids, in Kent County. Here the lime-rock is more extended, and a thickness has been determined to it of fourteen feet. The rock is characterized by the fossils Nucula, and Cyathophyllum vermiculare. This stratum affords the only limestone for the kiln, or other purposes, except occasional boulders, to be found in the interior of the State, and its value is the more to be appreciated, as the formation is itself of very limited extent.

LOWER COAL.

But two continuous beds of workable coal are ascertained to exist in the State. The lowest of these, lies at a small distance only above the limestone stratum, and is associated with a very thick bed of shale, which is also sufficiently bituminous to answer the purpose of an inferior coal.

COAL OF JACKSON COUNTY.

That portion of the lower coal bed, which underlies a portion of this county, makes an outcrop in the valley of Sandstone Creek, town of Spring Arbor, and has there been penetrated to the depth of three feet. The thick bed of shale opened at Jackson, undoubtedly is associated with, and belongs to, this coal stratum.

COAL OF INGHAM COUNTY.

Passing down the easterly side of the basin, the coal is again met with, in the north-east corner town of Ingham County, where it is embraced in a succession of shales and friable sandstone, cropping out in the banks and bed of the Red Cedar River. The coal has been penetrated two-and-a-half feet. But neither here nor in Jackson County is the entire thickness of the bed determined.

"The coal at this point," as is observed in the Report of Mr. Douglass, of last year, "is very accessible, and must, ere long, prove of great importance. It is situated on a stream that may be made navigable for flat-bottomed boats and perogues, with comparatively small expense, for a considerble portion of the year, and opening a direct communication with Lake Michigan."

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It may here be observed, that the coal of this lower bed, universally, has more than usual compactness and purity, and is equal to the best bituminous coal of Pennsylvania.

COAL OF SHIAWASSEE COUNTY.

The coal again makes its appearance at the border of the basin, near the County Seat of Shiawassee County, where it crops out between thick and extensive layers of sandstone, in the banks of the small creek entering Shiawassee River. The coal has here a thickness of from three and a half to four feet, and is accompanied by shale, the entire thickness of which is not ascertained. This coal is very eligibly situated for mining. It is of excellent quality, and the dip is so slight, that but little depth of excavation will be required. This is the only locality in the State, where coal, to much extent, has been raised for economical use. Both the coal, and associated shale, are constantly employed to great advantage, at the steam mill of Mr. McArthur, in Corunna, as well as by neighboring smiths.

From an area of eight by nine feet, Mr. McA. raised four hundred and sixty bushels of coal and shale, and he informs me that it can be sold at the county seat for ten cents per bushel.

The underlying limerock stratum makes an outcrop about a mile south-west from this point, in a bed of probably many acres in extent.

Shales of Flint River.—The coal bed and its accompanying shale may be traced still further east, to the Flint River, in Genesee county. Here the former probably has nearly thinned out, as only loose masses are found, in the bed of the river. The associated black shale and slate may be observed in the river banks, (town eight north, five west,) where it attains a thickness of sixteen feet, and is underlaid by the sandrock.

The coal of the Shiawassee and Flint Rivers, appears to occupy the extreme edge of the coal basin, which here thins out into a wedge form, narrowing gradually until it terminates in a mere point, probably as far easterly as Lapeer county. The inclination of the strata is north-westerly, to an amount which would soon carry the coal beneath the surface, but appearances seem to warrant the conclusion, that at this point a large part of the rocks of the coal measures, continued northerly, have been entirely removed.

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UPPER COAL.

The out-crops of this coal, within that part of the State under consideration, are of small extent. It is found at the surface, on and near Grand River, in the northern part of Eaton county, and with its associated shales and sandstones, occupies the central part of the coal basin, probably including the whole of Clinton and Gratiot counties. Except in the extreme south-west corner of the former county, it lies too deep for examination.

Most of this coal is inferior in quality and thickness to the lower coal. It composes several layers, not exceeding in thickness from one to two feet each, and is embraced in alternating strata of dark gray shales, blue clay, sandstones, and thin beds of argillaceous iron ore, exceeding in the whole 20 feet.

COAL OF EATON COUNTY.

Sections of the alternating strata of coal and accompanying rocks, taken on Coal and Grindstone Creeks, were given by Mr. Douglass in his report of last year. As that report contained full local details of all the coal-bearing rocks of Jackson, Ingham and Eaton counties, I shall here allude to the rocks of that portion of the State, only in such a general manner as will be necessary, in order to afford a comprehensive view of the coal measures of our State. By reference to the document alluded to, it will be seen that, though inferior in thickness to the lower coal bed, the several strata of coal exposed on the creeks above mentioned, have an aggregate thickness of from two to three feet, and will, no doubt, prove of importance under a more settled condition of that portion of the State.

INCLUDED SANDSTONES OF THE COAL MEASURES.—GRAY AND YELLOW SANDSTONES.

The sandrocks included between the upper and lower coal, are mostly of a coarse, quartzose character, and of a light gray or yellow color. Most of the strata are friable, but harden on exposure. They are distinguished from the quartzose sandstone below the lower coal, by containing impressions of the coal plants. These are referable chiefly to the genera Lepidodendron, Stigmaria, and Calamites.

These rocks are found outcropping at numerous points through the northern part of Jackson county, the western part of Ingham, and east-

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ern part of Eaton counties, and portions of Calhoun, Clinton, Shiawassee, and Genesee. In all of the above named counties they occur in situations which admit of being economically quarried, and may often be obtained in firm blocks of any dimensions required. From this series of sandrocks was furnished the material for the construction of the State Penitentiary at Jackson, and at several places, as at Napoleon, excellent grindstones are manufactured from it.

RED OR VARIEGATED SANDSTONE.

This rock immediately underlies the upper coal and shales. Its outcropping edge is found in the valley of Grand River, in the northern part of Eaton county, and in the banks of the Lookingglass River, in the adjoining towns of Clinton county, and in township seven north, six west, Ionia county. No fossil plants were discovered in this rock. It has been employed with advantage as a building material. The entire thickness of the included sandstones must be several hundred feet.

The following general section will exhibit at one view, the relative order and thickness of all the rocks of our coal measures, above described, so far as a sub-division of them has been found practicable:

General Section, applicable to the Coal Basin of Michigan.

	Thickness.
Diluviums and tertiary clays,	1 to 100 ft.
Brown or gray sandstone,*	20
Argillaceous iron ore, in thin included beds,*	1
Coal strata, alternating with friable slaty sandstone, and thick beds of black shale and slate;* in the whole probably,	30
Red or variegated sandstone, (Clinton and Ionia counties,	Undetermined.
Light, gray, coarse, quartzose, micaceous sandstones. Generally in thick layers and forming ledges, mostly friable and easily quarried. (Seen at intervals along Grand river, from Jackson to Grindstone creek, Eaton county,	
Coal and black bituminous shale, (Jackson, Ingham, Shiawassee, and Genesee,)	20
Blue, compact, slaty sandstone, (Shiawassee county,)	
Gray limestone, found in local beds, being relics in place, of a once continuous stratum. (Encircles the coal basin from Grand Rapids to Shiawassee River,)	14

*Counties of Clinton and Eaton.

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The rocks in the above section embrace all those which are included in the division marked C, in the *Geological Section*, prefixed to this report.

SANDSTONES IMMEDIATELY BELOW THE COAL.

These sandstones, (marked D, in the plate,) as well as most of the formations below the coal, were fully described in my report of last year. I shall, therefore, now notice them only so far as to exhibit their relative position in the series, viewed as a whole, and the extent of country occupied by them.

These sandstones, which, in the report alluded to, are described under the name of fossiliferous, ferruginous sandstones, excepting in some of the uppermost strata, are generally fine grained and of a yellow color. Some strata of the latter abound in marine fossil shells, among which the genus Nucula is very abundant, and there were observed species of Atyrpa, Bellerophon, Euomphalis, and Pterinea.

Though here classed as beneath the coal rocks, these sandstones are associated with that series of rocks which are usually regarded as belonging to the carboniferous era. They occupy nearly the whole of Calhoun county, the lower half of Jackson, and the northern half of Hillsdale county; through which counties their outcrops may be observed at numerous points, or they are reached in almost all the deep wells. It is probable, also, that these rocks occupy most of the eastern portions of Jackson and Shiawassee counties, east of the limestone stratum above described; and they make their appearance, at its eastern edge, on Lake Huron, near the entrance of Saginaw Bay.

The aggregate thickness of these sandstones may be estimated at upwards of 300 feet.

CLAY, CONTAINING KIDNEY ORE OF IRON.

This very valuable formation immediately succeeds to the sandstones above described, underlying them and cropping out at the extreme southerly bend of the basin. It occupies a part of the south-western portion of Calhoun county, the whole north-eastern portion of Branch county, or nearly so, and part of the western and central portions of Hillsdale.

It consists of an indurated, grayish brown clay, having much the appearance of a shaly limestone or dark gypsum, regularly stratified, in

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which are imbedded nodular masses of kidney ironstone. This is a rich and valuable ore and occurs at several points conveniently for working.

This formation is the lowest that is discoverable in this portion of the State, and is not certainly known to make an outcrop elsewhere.

For further description of this clay and its contained ore, I refer you to the Annual Report of the State Geologist of 1840, and to my own, appended thereto, for many practical considerations relative to the value of the ore and its imbedding clay. This formation is marked F, in the plate.

SANDSTONES OF POINT AUX BARQUES.

These are mostly a coarse, greenish gray or rusty yellow rock, in some of the layers approaching a conglomerate. They form cliffs along the shore of Lake Huron, in Huron county, rising at Point aux Barques to twenty feet. Fossils are rare, but Atrypa and Calymene were obtained. These sandstones occupy the coast north of town seventeen, being visible in ledges for about twenty miles. The upper portion of the series contains numerous, small imbedded pebbles of quartz, so as to resemble a conglomerate or puddingstone, but no great thickness is observable, of rock possessing this character.

An extension of the outcropping edge of these sandstones, it is probable, gives rise to that swell of land which forms the summit level of the Peninsula, stretching in a south-westerly direction from Point aux Barques to Hillsdale county, where the green and yellow fossiliferous sandstones, above described, overlie it. But throughout this whole extent no outcrop of the rock is visible, owing to the thickness of the diluviums.

These sandrocks, taken in connection with the formation next described, hold a place in the Geological series, corresponding to the "waverly sandstones," and "conglomerate," of Ohio, but the deposition seems to have been made under somewhat differing circumstances. No well defined series is apparent in our State, answering fully to the Ohio conglomerate; though the upper portion of the sandstones of Point aux Barques approach that character.

The whole thickness of these sandstones probably exceeds 250 feet. This group is marked F, in the plate.

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CLAY SLATES AND FLAGS OF LAKE HURON.

Alternating with the lower portions of the sandstones of Point aux Barques, are strata of slaty sandstone, approaching the character of slate; to which succeeds a compact, micaceous clay slate of a blue color. This latter rock continues to occupy the coast for about thirty miles, or from township twelve to township eighteen north, and rises in ledges of from five to fifteen feet.

The slaty sandstones intervening between these clay slates, and the overlying coarser sandstones are of a flaggy structure, in some of the layers, and from these were obtained those fine flagging stones, which have been extensively used, for three years past, for pavements in the city of Detroit. Some of these strata are distinguished by ripple marks. No fossils have been discovered in this formation.

These slates and alternating sandstones may be considered as the upper salt rock of our State. They have been passed through in boring for Salt at Grand Rapids, and found to yield strong supplies of brine. At this point they are found also to alternate with beds of gypsum and gyperous marls, as will appear by reference to the table of the strata passed through, given on a subsequent page. The thickness ascertained to these slates, at that point, is about one hundred and seventy feet.

SOFT, COARSE-GRAINED SANDSTONE.

A series of sand-rocks, answering to this description, and generally of a dark color, succeeds to the clay slates and shales last above described, and has been penetrated at the borings at Grand Rapids, 230 feet. There are, as yet, no data for ascertaining the entire thickness of this series, since it does not make its appearance at any point on the coast of the Peninsula, this rock evidently forming the bed of Lake Huron, near its foot, and lying too deep for observation. In relative position, and perhaps in character, this rock, or a portion of the series, corresponds with the lower salt rock of Ohio and Virginia, and is the rock from which, in these States, the strongest supplies of brine are obtained. The result of the borings in our own State, thus far, would seem to confirm the opinion that this rock is the equivalent of the lower salt rocks of those States.

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BLACK, BITUMINOUS, ALUMINOUS SLATE.

Underlying the sandstones above noticed, though also nowhere observed to make an outcrop within the portion of the State now under consideration, there is a well characterized, black, bitumous slate. This rock makes an outcrop much farther to the north, and is described by Mr. Douglass, in his accompanying report, to which I refer you. This slate contains much sulphuret of iron; it will burn readily, and in general character and position, it agrees with the black shale stratum of Ohio and Indiana, but its thickness is probably not nearly so great.

LIMESTONES OF LAKE ERIE.

This formation, which immediately underlies the black slate, is by far the most continuous and extensive rock formation in the western States. It is found outcroping in several district ranges throughout Monroe County; forms a considerable part of the lake coast, and serves as a basis to the islands at the mouth of the Detroit River, and is an extension of the rock formation, which occupies the whole western part of Ohio, and the northern and eastern portions of Indiana. It is found forming the bed of Lake Michigan at its head, and undoubtedly is the underlying rock of a considerable portion of the extreme south-western part of our State. The overlying tertiary clays, conceal a great part of this formation.

The character and economical adaptation of these limestones have been sufficiently set forth in former reports, to which, accordingly, I refer you for detailed information.

Among the fossils contained in the limerock, I distinguish the following genera:

Calymene and Asaphus, Cyathophyllum, Productus, Terebratula, Spirifer and Dethlyrus, Bellerophon, Atrypa, Strophomena, Orthocera, Encrinus, Retepora and Madrepora.

In proceeding southerly from the outcrops of the slates of Lake Huron, a limerock is met with, which may be seen in the bed of a small stream near the lake coast, town nine north, sixteen east. In character and fossil contents it bears a resemblance to that of Monguagon, Monroe county, but its position would seem to indicate it rather as an included stratum in the series of sandrocks and shale, which are higher in the geological series.

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The following general section, will exhibit the order of succession and approximate thickness of the rocks above described, lying below the coal basin, and is a continuation of the table given on page 326, of the successive rock formations of the settled portions of our Peninsula:

General Section, applicable to all the rocks below the coal beds of Michigan, in that portion of the Peninsula included in this report.

			Mean thickness
D.	Sandstones of Jackson, Calhoun and Hillsdale.	Coarse quartzose, grayish sandrocks, Fine grained, ash colored and dingy green, interstratified with slaty sandstone and clay shales, Yellow sandrocks, colored by iron, and abounding in fossils,	300feet.
E.	Dark gray and blue indurated clay, containing kidney iron. (Counties of Hillsdale, Branch and Calhoun,		45
F.	Coarse sandstone, or partial conglomerate, Yellow and greenish sandstones. (Coast of Lake Huron, at Point aux Barques,)		250
G.	Slaty, argillaceous sandstone, alternating with sandstone and clay slates, Blue clay slates and flays, with alternating gypsum beds and gypseous marls. (Lake Huron coast, below Point aux Barques,		180
H.	Soft, coarse grained sandstones, (occupies bed of Lake Huron, at its foot,) exceeds		230
I.	Black alluminous slate, containing pyrites. (Coast of Lake Huron, at Thunder Bay,)		
K.	Gray limerock, fossils abundant. (West end of Lake Erie,		

The rocks in the above section embrace all those which are included in the divisions marked D, E, F, G, H, I, and K, in the Geological Section prefixed to this report.

DIP OF THE ROCKS.

Great irregularities of dip are observable in all of our rocks, which circumstance has increased the difficulty of determining the precise relative position, extent and thickness of the several strata. Many of the sandstones belonging to, and immediately underlying the coal, are much shattered, as if by a quick vibratory motion, and a similar cause has occasioned contortions of dip, in most of the still older rocks. I have, therefore, refrained from noting the amount and direction of dip at the various localities mentioned. All the rocks on the eastern slope of the

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Peninsula, south of Saginaw Bay, have a general dip north-westerly, while the dip along the southerly and westerly border of the basin of coal bearing rocks, is such as to indicate the counties of Clinton and Gratiot as occupying nearly the central part of the coal basin. This being the case, the carboniferous sandstones, with their included coal beds, may be considered as extending far to the north of the Saginaw and Grand Rivers, possibly as far as town twenty-three north, or to the head waters of the Maskego and Tittabawassee Rivers. This supposition, the character of that region, as well as the dip of the rocks, would seem to warrant. But the country alluded to, is, at present, in an uninhabited condition; the surface, moreover, is very generally level, and so completely overspread by the deposits of diluviums and tertiary clays, as totally to conceal the rock formations. Surveys have, however, been extended into that region, so far as was practicable with the means afforded, and much valuable information is collected.

If I am correct in the above conclusion, the coal bearing sandstones, or, strictly speaking, the coal basin, occupy an extent of surface, nearly oval in form, whose centre very nearly corresponds with the true centre of the Peninsula. The tract thus embraced is 150 miles in length, north and south, and upwards of 100 in extreme breadth; covering an area of about 11,000 square miles, or one-fourth the entire area of the Lower Peninsula.

It may be added, that the average dip of all the rocks described, does not probably exceed 15 feet in the mile; though the dip may be said to vary, at different points, from 10 to 20 feet per mile.

BORINGS AT THE SALT WELL, GRAND RAPIDS.

The borings for salt at the village of Grand Rapids, Kent county, commenced in the limerock stratum, mentioned above, as constituting the terminating rock of the coal basin. At this point, several of the next succeeding series of sandrocks appear to have thinned out, and their place is here occupied by alternating strata of clay slates and sandstones, with gypseous marls and beds of gypsum. These continued to a depth of one hundred and ninety feet, and below this the borings have been carried mostly through series of sandrocks, to the depth of four hundred and fifteen feet.

Two beds of beautiful crystalized gypsum were passed through, at a depth of about sixty feet, and were found to be from four to six feet in thickness. This gypsum, it will be recollected, from the notice of it in

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former reports, appears at the surface at Gypsum Creek, three miles distant; showing an inclination to the rocks, at this point, of about twenty feet in the mile.

By reference to a map of the State, it will be apparent that the strongest brine springs, (among which are included those in the vicinity of these borings,) make their appearance along a line which will be found to correspond with the "synclinal axis," or axis of the dip of the rocks composing the great Peninsula basin; a circumstance which would be looked for, from the fact that the ordinary law of gravitation would conduct the strong brines to the lowest levels of the rock strata. While, therefore, the depth to which the boring must be carried, in order to reach the lower salt bearing strata, will be greater than would be the case in some other portions of the State, the comparative strength of the brine obtained may be expected to be proportionably increased.

Through the politeness of the Hon. Lucius Lyon, I am enabled to subjoin a section of strata passed through at the boring above mentioned:

Diagram of Strata passed through at Salt Well of Hon. Lucius Lyon, Grand Rapids.

		Thickness in feet.	Total depth in feet.
1	Hard gray limerock, irregularly stratified, and in portions cavernous,	14	14
2	Yellow sandrock, producing fresh water,	6	20
3	Blue clay,	2	22
4	Coarse, reddish sandrock,	5	27
5	Blue clay,	3	30
6	Clay slate, with thin layers of gypsum interstratified,	11	41
7	Clay slate,	18	59
8	Gypsum,	4	63
9	Clay slate,	2	65
10	Gypsum,	6	71
11	Clay slate,	3	74
12	Bluish sandrock, very hard, with sharp grit,	8	82
13	Bluish clay-rock, intermixed with particles of reddish rock, compact. This rock is strongly impregnated with saline particles,	18	100
14	Sand and clay rock alternating	7	107
15	Carbonate of lime and gypsum, combined; very compact,	10	117
16	Gypsum,	7	124
17	Clay slate,	9	133
18	Gray sandrock, of very sharp grit, and hard	5	138
19	Clay rock,	2½	140½
20	Gypsum, with vein of salt water,	6½	147
21	Clay rock,	6	153
22	Gypsum and clay slate, or gypseous marls, alternating,	19	172
23	Gypsum,	3	175
24	Clay rock,	3	178
25	Gypsum,	1	179
26	Hard sandrock, producing fresh water,	1½	180½
27	Clay rock, free from saline matter,	10½	191
28	Hard sandrock, very compact, and of dark color,	7	198
29	Soft sandrock, nearly colorless	18	216
30	" of nearly blue color,	32	248
31	Loose, coarse grained sandrock, of reddish color, opening a very copious spring of fresh water,	17	265

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Below the strata last noted in the above table, the borings have continued through a further depth of 150 feet, but the data received are not sufficiently minute to enable me to extend the table. From the information obtained, they would seem to have passed through mostly soft, light colored sand rocks, of a coarse grain, and with a sharp grit, and in the lower portions containing cavities, into which the drill sometimes falls several inches. Particles of salt were brought up, and the rock yields a very strong brine.

All the strata, from the depth of 81 to 179 feet, or until the sandrock was reached, were strongly impregnated with saline particles, and yielded brine one-fifth saturated. These clay slates and marls may be regarded as the "upper salt rock," and they are thus shown to furnish a brine superior in strength, to that of many of the salt wells of Ohio, and which, even could no stronger brine be obtained, is capable of sustaining a profitable manufacture.

The brine now obtained, at a depth below the above, of about 230 feet, may be supposed to proceed, by veins, from the "lower salt rock," lying at still greater depth, and from which the strongest and best supplies of brine in our State may be expected to be obtained.

The immense quantity of fresh or slightly brackish water, which is discharged through the orifice, (equal to a hogshead per minute,) in the present state of the operations, renders it impossible to decide, with absolute certainty, what will be the full strength, as well as supply, of the strong brine; but from that which can be obtained, it is estimated that of the brine which the well is now capable of furnishing, from 50 to 60 gallons only will be required to produce a bushel of salt. This, it will be seen, is equal in point of strength, to that obtained from the salt wells on the Kenawha River of the Ohio, where the borings are carried to about the same depth, and at which are manufactured, annually, from one to two millions of bushels of salt. Next to those of the State of New York, the Kenawha salt wells are considered the best in the Union.

In addition to the quality of the brine obtained, the advantages for the manufacture of salt at the point under consideration, are not exceeded at those places in our country, where the manufacture is conducted to the largest extent. The supply of wood for fuel and other necessary purposes, is abundant, and will tend greatly to reduce the price for

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which the manufacturers will be enabled to furnish this article. And though the whole matter may be said to be in an incipient state, there is every reason to feel satisfied with the prospect, which so fair a beginning holds out to the State, for obtaining a result so very desirable, as that of supplying her citizens with this important article, from the product of her own manufacture.

SUMMARY—COMPRISING GENERAL OBSERVATIONS ON THE ECONOMICAL RESULTS OF THE SURVEY.

From the view we have now taken of the rock strata, which compose the lower half of the southern Peninsula of Michigan, it will be seen, that the geology is of an exceedingly simple character, while it is, at the same time, richest in the mineral wealth most important to an agricultural community.

Michigan occupies a portion of the great Valley of the Mississippi; the richest in the world—and which is wholly occupied by a broad extent of the rocks classed by geologists in the transition and secondary formations. Of these, the great limestone formation, (of which that of the west end of Lake Erie is a portion, and which concluded our view of the several geological groups which make up the organized portion of the State,) occupies the lowest place, and is the lowest and oldest of the rocks found on the Lower Peninsula of Michigan. The Upper Peninsula of our State, as will be seen by the Report of the State Geologist, is constituted of lower and still older rocks, and presents, in consequence, a very different aspect, as well as a different mineral character, from the Lower Peninsula.

The most important of the minerals usually associated with the rocks of those formations which compose lower, or Michigan proper, are iron and lead ores, coal, salt, gypsum and marls. There are no indications which would warrant the supposition that *lead*, in any valuable quantity, exists on the lower Peninsula. At least, it may be positively assumed that no ores of lead will be found throughout any of the present organized counties of the State. All the other minerals mentioned, exist, and some of them, as has been shown, in great abundance. The results of the examinations into the economical geology of the State, as regards the most important of its minerals, I shall here briefly recapitulate.

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IRON.

An ore of this mineral, under the form of kidney ironstone, exists, chiefly in the counties of Branch and Hillsdale. It is sufficiently extensive to be of much value, and will give an average yield of about 30 per cent. of metal. This ore is embraced in the clay formation, described on page 131 of this report, and a more extended notice will be found in the Geological Report of 1840, pages 25 and 86.

Iron, under the form of bog ores, is found in various parts of the State. The most extensive deposits, and those alone which it may be safe to assert will yield a rich profit, are at the county seat of Kalamazoo Co., near Concord, in Jackson Co., in the county of Oakland, and perhaps Wayne. No furnaces, for the reduction of these ores, have yet been erected. It is shown, by the late census, that there are 15 furnaces in the State, for the casting of pig iron, requiring 614 tons, and the whole amount of iron imported, under various forms, is much greater. The cost of this importation, which in so heavy an article as iron, is very considerable, might, and ought to be saved to the State, by a domestic manufacture from our own material. For more detailed observations, and an account of the localities at which this ore occurs, see Geological Report of 1840, pages 28, 60 and 100.

Bituminous coal will be found in abundance for all the wants of the State. The only locality where mining operations have been commenced, is at Corunna, Shiawassee county, where this mineral has been already used to considerable extent, and, though in the midst of a heavily timbered country, is for many purposes, preferred to wood or other combustible. Other points also, eligibly situated for the mining of coal, have been made known in Ingham, Eaton and Jackson counties, and it may be fairly inferred, from the facts already determined of the range of coal bearing rocks, that out-crops of the coal beds will be found at numerous other points than those now known in these counties, and that coal will also be discovered in several counties where it is not now known to exist, as through parts of Kent, Ionia, and Genesee counties. (See further statements under pages 126 and 127 of present report.)

SALT.

There no longer exists any doubt that this mineral may be obtained at a cheap rate and in any required quantity, for supplying the

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great and increasing demand of our State. The operations commenced at the State salt wells near Grand Rapids, Kent county, and on the Tittabawassee, Midland county, are not sufficiently advanced to determine the extent of the anticipated profit of the manufacture. The strongest brine obtained, up to this time, at the salt well of Mr. Lyon, at Grand Rapids, will, without doubt, prove as productive as that of the best wells of Ohio and Virginia. So that the present results may be considered as certainly indicative of the success that was formerly supposed would attend the boring for salt, if properly conducted, within our State.

Michigan *imports* salt, probably to the amount of $300,000 annually, which large amount of money might, as it soon will, be saved to the State, by the supplies furnished from our own resources. The average price of salt, at the ports of entry, has been about three dollars per barel for the last four years. But when the works now in progress shall have been brought into successful operation, supposing no stronger brine to be obtained than that above stated, the article of salt can be furnished at a much less price than it now costs the consumer.

GYPSUM.

An extensive deposit of this very valuable mineral occurs in the vicinity of Grand Rapids. The bed is here very extensive; is about six feet in thickness, and in quality is equal to the best Gypsum of Nova Scotia. The same mineral is found elsewhere in our State, but this is by far the most important locality at present known, and one that affords every facility for quarrying and distributing the mineral over the State. A mill was erected during the past summer, and the ground plaster, for manure, is already manufactured in considerable quantities.

Though the above locality is the only one known at which Gypsum occurs, *in the interior* of our State, yet, from the ascertained Geological character and dip of our rocks, and the associations of this mineral, it may be presumed that Gypsum and its associated marls, will be hereafter disclosed at other points in the vicinity of the above bed, and that it will be found also to occur at other localities, in the interior, which are concealed from present observation.

Shell marl occurs in the greatest abundance throughout the State, but more especially among the marshes and lakes of the openings. It forms deposits, varying in extent from 1 acre to 100, and these are pretty widely distributed. Its exceeding great value and cheapness, as a

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manure, is far from being truly appreciated by our citizens. But the time is rapidly approaching when this invaluable mineral will be no longer despised because it is abundant, simple and cheap, and our State will then find, in her numerous marl beds, one of the richest treasures of which she is possessed. For a full account of the nature and uses of this mineral, the reader is referred to page 94 of the report of 1840, and to previous reports.

The character, applications, and value of the rocks with which the above mentioned minerals are associated, together with other matters of practical interest, connected with the Geological structure of our State, are so fully detailed in the preceding pages and in previous reports, that further allusion to them, in this place, is deemed unnecessary.

From the foregoing facts, it cannot fail to be seen, that while the soils sf our State are admirably adapted to the various purposes of agriculture, and for the production of wheat—the most important product of the soil—superior to those of any known portion of the Union, Michigan possesses, also, within herself, all the mineral treasures that are really requisite for sustaining and renovating her soil, for supplying the wants of her homesteads, and for maintaining those branches of domestic industry which are of the most importance to her people. Thus, science discloses those treasures, buried in the earth, which art and industry may appropriate to increase the profits of labor. And though the objects of science are general in their nature, and not confined by the limits of districts or States, the legislator feels a peculiar interest in having those resources developed by its aid, which may be turned to the advantage of his rising commonwealth; commerce, agriculture and the arts, receive a stimulus by the new source of wealth and supply which it opens to the wants of each. In this view, the study of Geology becomes one of the most universally useful that can occupy the attention of practical men.

In comparing the extent of our resources thus obtained, with the little that was known concerning them a few years ago, we have reason to feel satisfied with the prospect of future wealth and importance, which it has opened to us. If, during the stirring times of an early settlement so rapid as has been that of our State, for the past five years, less interest was excited by the development of our mineral resources than their im-

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portance might demand, a satisfactory cause may be found in the imperfect state of the knowledge hitherto obtained, and in the pressure of the more immediate wants of a new, somewhat fluctuating and unsettled community. During the period mentioned, however, the population of southern Michigan has advanced, from a less number, probably, than 60,000 to 212,000; a rate of increase unexampled even in the annals of a series of settlements, to the progress of which the world affords no parallel. Meanwhile, the liberal course of our State policy has been steadily unfolding her resources, and, at this moment, notwithstanding the burden of a heavy debt, and the accumulated pressure of more widely felt financial difficulties, we are rapidly advancing in wealth, and are becoming awakened to the means of which we find ourselves possessed, for successfully competing with older States, in the departments of agriculture, commerce and manufactures. With lands among the richest in the world, well watered and advantageously situated for market, with water power abundant, and with an extent of coast and facilities for water transportation unequalled by any other inland State, and added to this, a population possessing a large share of that character for enterprise which distinguishes their countrymen, nothing will tend more to give full efficacy and permanency to these advantages, than to make more perfectly known the value of our mineral resources. Our State is now sufficiently advanced to be able to avail herself, properly and with certainty, of the advantages alluded to, and there is every reason to believe, that these will not longer fail to command attention, and that the results will equal the most sanguine anticipations.

BELA HUBBARD,
Assistant Geologist.

METEOROLOGICAL OBSERVATIONS FOR 1853.

BY L. WOODRUFF, OF ANN ARBOR.

ANN ARBOR, Michigan, April 3d, 1854.

J. C. HOLMES, Esq.—*Dear Sir*—In compliance with the request contained in your note to me, of the 25th inst., I herewith send you a Meteorological Report for 1853, including tables of temperature, &c., followed by a brief summary of the most important points in the

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weather of each month. I regret that I have not yet made any observations in regard to the temperature of the soil, or atmospheric humidity, both very important points in Agricultural Meteorology. If what I here send you, shall help to awaken any additional interest in this important science, however, it will not be altogether useless.

Very respectfully, your obedient servant.

L. WOODRUFF.

1853.

	Mean Temperature at 7 A.M.	2 P.M.	9 P.M.	Monthly Mean.	Maximum.	Minimum.	Clear days.	Part clear.	Cloudy days.	Rain.	Snow.	Thunder.	Amount of Rain and melted Snow
January,	21.7	31.6	24.9	25 7	47	6	10	6	15	3	8		60
February,	19 8	31 5	24.2	22.7	48	5	7	0	21	3	10	1	1.25
March,	27 9	41.2	33.3	34 1	62	6	6	8	17	7	8	0	1.53
April,	38.9	53.7	43 4	45 5	75	27	15	1	14	17	2	4	5 03
May,	50.3	63.8	53 8	56.3	82	32	14	6	11	15	0	6	5.94
June,*	65 8	80 5	68 9	71 ·	94	53	17	7	6	10	0	11	.71
July,	62.4	77	66.7	69 6	9	54	22	3	6	9	0	5	1.10
August,	66 3	79	67.3	72 2	9	43	17	4	10	11	0	11	3.96
September,	55.3	70 6	59 5	61 8	87	33	13	4	13	8	0	5	1 41
October,	51 4	55 8	44.3	45.8	69	25	16	3	12	6	0	1	1.23
November,	36.1	4	40.4	39.4	6	17	5	5	20	11	4	1	3 05
December,	23 8	31.5	26.4	27.3	19	3	7	2	22	1	13	0	1.15
Annual Means,	42.3	53.3	46.2	47.7			149	49	167	101	45	45	26.96

* Maximum was 98 and upwards on nine days of the month.

WINDS.

	W.	N.	E	S.	S. W.	N. W	N. E	S. E.
January,	5	3	0	3	9	6	4	1
February,	7	3	2	1	6	5	1	3
March,	7	2	0	2	4	10	3	3
April,	3	4	3	3	5	3	6	3
May,	5	3	3	1	4	6	2	7
June,	5	1	0	8	6	5	1	4
July,	4	2	4	7	4	5	2	3
August,	3	5	5	2	5	6	2	3
September,	4	6	3	7	3	2	0	5
October,	6	4	1	6	4	5	1	4
November,	4	3	3	5	7	2	2	4
December,	5	3	1	8	7	5	1	0
	58	39	26	53	61	60	25	40

Frost April 15th, 18th, 19th, 20th, 21st, 26th; May 1st, 11th, 14th, 20th, 25th and 26th. Last snow in Spring, April 25th. Frost Aug. 28th, Sept. 22d, 25th and 29th. First snow Oct. 23d.

The weather of January was not severe, the lowest temperature was 6 deg. below zero, on the 26th, and the highest 47 deg., on the 8th; About 8 inches of snow fell—the amount of rain was not appreciable.

February, with the exception of a few days, was quite cold and blustering, the mean temperature being 7 deg. below that of the same month for 1852. The precipitation was, rain 70-100ths, and snow about 10 inches.

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March furnished less of variable and unpleasant weather, than usual. 1.20 inches of rain fell on the 18th and 19th. The coldest day was the 15th, (mean temperature 16 deg.,) and the warmest 30th, (mean temperature 31 deg.)

April.—A tremendous gale of wind from S. W. prevailed on the 8th. Rain commenced on the evening of the 11th, and continued without any intermission until 10½ A. M. of the 13th. Showers then came on at 3 P. M., which poured a perfect deluge of rain, accompanied by vivid lightning and heavy thunder.

The rain closed on the 14th. The quantity of water which reached the ground during this storm was 3.77 inches—nearly twice the average for the entire month. Another storm of rain and sleet occurred on the 23d and 24th, which was severely felt, the temperature being only a few degrees above freezing. Owing to the abundant moisture and somewhat more genial temperature, vegetation came forward some days earlier than during the same period the year previous.

May.—Rain began on the 2d, and continued almost every day until the 23d. Nearly six inches of rain fell in the space of three weeks. This excessive precipitation may, perhaps, be compared with that of May, 1851, but was not, as in that case, succeeded by seasonable showers, which would have ensured a fine growing season, and in consequence, vegetation was generally checked before it had attained a fair start. It appears from the reports of the Smithsonian Institution, that the excessive rains of April and May were experienced only to a partial extent, throughout the country. The drought and high temperature which followed here, however, prevailed almost everywhere, to the first of these extremes, the only exception being in Wisconsin and Iowa. "In these States only, the rain was profuse and somewhat greater than the normal mean. The almost universal deficincy of rain for this month has seldom been equalled, and the partial exceptions, or mitigations rather, in addition to that just mentioned, were in lower Florida, some parts of Virginia and of northern Ohio, and eastern New York, with western Massachusetts. The vicinity of New York was the only decided exception east of Wisconsin." The entire amount of rain at this place between the 23d of May and 25th July, did not exceed one inch. During July, though the drought continued in most parts of this State, it was interrupted at the south and west by abundant rains; in

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Iowa and Wisconsin there was an excess, nearly double the usual amount. The States where severe droughts prevailed during this month were Michigan, eastern Ohio, western Pennsylvania and New York. As will be seen by the table above, the mean temperature of the month was considerably below that of June, and the maximum (90 deg.) was reached in but a single instance.

August was the warmest month of the season, and the moist atmosphere which prevailed, rendered the weather very oppressive. On the early days of the month, the rains were abundant in some parts of this State, and did much in dispelling the effects of the previous drouth. The excessive precipitation and humidity of the atmosphere which prevailed in parts of New York, Pennsylvania and New Jersey, and particularly at New Orleans, being everywhere attended and followed by high temperature was quite unequalled, and in many places very destructive to life. In portions of the States above named, the rains were nearly beyond precedent, from four to eight inches falling in ten hours. During the last half of the month but little rains fell at this place, and the temperature declined. A heavy storm occurred on the 30th. The early days of September were warm, with a most sultry atmosphere. The amount of rain for this month was small however, especially during the latter part.

October continued very dry—no appreciable amount of rain falling here until the 22d. Between 20th September, and 22d October, the rain at this place did not exceed 1-100 of an inch. For November, however, the quantity of rain was unusually large, and much above the maximum for the previous four years. The greater part of the month was, moreover, very pleasant and mild.

The temperature of December was, up to the 17th, much above the normal mean, and after that date quite steady and winter-like—the maximum rising above 32 deg., on but three days. About eighteen inches snow fell during the month; the quantity of rain was not appreciable.

In conclusion, it may be observed that the extremes of temperature and precipitation, as well as drouth, have been exhibited to an unusual degree in different parts of our country, during the summer of 1852. In many instances, the effect of extreme climatic conditions on agriculture and the general health, has been strikingly exemplified. The

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system of Meteorological Observations, now conducted by the Smithsonian Institution, is more extensive and complete than any before projected; and its results will, doubtless, when fully and definitely considered, tend to exhibit the influence of climate on animal and vegetable life, and to explain its causes throughout our Continent.

Those meteorological conditions which most directly affect agriculture, are temperature, precipitation, and humidity. These, and the temperature of the soil, every farmer ought to be able to measure; the cost of the instruments required being but trifling. Such observations carried on accurately for a short time, would enable the observer to gain for himself much important information, in regard to the nature and conditions of soils, and the germination and growth of plants; and were the plan generally entered upon, a most valuable mass of scientific matter would soon be collected.

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ABSTRACT OF A METEOROLOGICAL JOURNAL FOR THE YEAR 1853.

BY M. MILES, M. D., FLINT, GENESEE COUNTY, MICHIGAN.

1853.	THERMOMETER.											WINDS.																			
												A. M.								M.								P. M.			
Mon.	A. M. average.	M. average.	P. M. average.	Monthly mean.	Warmest day average.	Coldest day average.	Greatest daily range.	Least daily range.	Max.	Min.		N	NE	E	SE	S	SW	W	NW	N	NE	E	SE	S	SW	N	NW	N	NE	E	SE	S	SW	W	NW
Jan.	17.1	29 6	22.8	23.2	8th,..	34.6	26th,.	02 0	22d,..	27.0	11th,.	3.	22d,...	48.	26th,..	12.	6	1	2	0	8	3	3	4	6	2	1	0	9	2	4	3	3	3	0	0	5	4	6	6
Feb.	14.3	27.6	21.9	21 3	28,...	38 0	9,....	16.0	21,...	40 0	16,...	1.	1,.....	44.	19,....	11.	5	0	0	2	1	3	3	7	6	0	0	5	1	1	2	2	5	0	2	4	2	1	10	2
Mar.	20.4	37.9	31 3	29 9	21,...	47 0	18,...	31.0	10,...	33.0	9,....	7.	28,....	58.	15....	64.	4	0	1	0	9	2	5	6	4	1	0	1	6	2	12	4	6	0	0	1	5	2	11	4
Apr	33.1	55 9	48.6	45 9	27,...	63.3	20,...	35.3	19,...	36 0	13,...	5.	28,....	78.	2,.....	17.	5	3	1	0	3	2	3	2	6	4	2	2	4	4	4	1	8	4	2	3	3	2	4	1
May.	47.3	63 9	60.3	57.2	16,...	73 3	19,...	40 3	1,....	26.0	5, 30.	4.	28, 29..	83	1,.....	33.	3	2	3	2	2	2	5	2	4	2	3	2	5	5	6	3	8	1	2	3	3	4	6	4
June	64.5	82 4	76.8	74 6	22,...	86.6	25,...	63.0	8....	28.0	7,....	8.	16. 21,.	94.	26,....	50.	0	0	1	1	10	3	3	2	1	0	1	1	7	7	10	2	3	0	3	1	6	7	4	4
July,	61 2	80 8	75.9	72 6	23, 24,	79.3	19,...	66.6	27,...	31.0	4, 25.	7.	26.....	93	13, 27,.	50.	1	4	0	0	1	3	4	1	5	2	2	2	3	5	7	4	6	2	1	3	4	4	5	6
Aug.	59.5	82.1	76.1	72 6	13....	86.0	28,...	57 0	29,...	40 0	1,....	9	11, 12,.	95.	20,....	34.	3	1	0	0	1	1	2	1	4	2	2	0	3	11	7	2	5	1	2	0	2	5	5	2
Sept.	53 0	70 4	65.8	63.1	3,....	78 6	21,...	46.6	25,...	29 0	29,...	5	3.....	89.	29,....	30.	3	1	0	0	4	2	2	0	5	2	0	0	12	3	6	1	6	2	0	1	10	4	3	1
Oct.	35 2	54.8	48.3	46 1	12,...	56.6	24,...	32.6	15,...	36.0	2,....	5	20.....	68.	10,....	23	2	0	1	0	1	4	4	2	6	0	1	0	5	8	6	5	4	0	0	0	1	8	3	4
Nov.	33 8	44.0	39.2	39 0	19,...	61.3	6.....	21 0	7,....	34.0	13,...	3.	19,....	67.	7,.....	06.	5	1	0	2	10	1	2	0	5	1	0	1	16	0	4	3	6	0	0	1	11	3	3	4
Dec.	23.0	31.2	27.0	27.0	6,....	40.3	29,...	13.0	8, 25,.	21.0	26,...	2.	11,....	44.	.....	10.	7	1	1	0	7	5	2	3	8	0	1	0	11	4	5	2	3	0	1	2	12	4	4	2

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THE STATE FAIR.

A DISCOURSE PREACHED AT DETROIT, BY REV. THOS. MUMFORD, ON THE SABBATH EVENING AFTER THE ANNUAL FAIR OF THE MICHIGAN STATE AGRICULTURAL SOCIETY, 1853.

DEUTERONOMY 1: 25. And they took of the fruit of the land in their hands, and brought it down unto us, and said, it is a good land which the Lord our God doth give us.

The great event of the past week was our Annual State Fair. By its unusual demand upon the means of transportation and the ways of accommodation, by its agency in increasing the picturesqueness of our streets, and gratifying our tastes for the useful and the beautiful, it monopolized the attention of the people, and became the chief occasion of labor and delight. Why should not its lessons be presented from a Christian pulpit? Everything in life has its moral and religious aspects; Christianity needs to be adapted to the varying wants and circumstances of mankind. Sermons utterly barren of allusions to present times and real life—fit to have been preached to the congregation in the ark, may be very free from heresy, and perfectly incapable of turning the world upside down with excessive zeal, but they hardly contain the Gospel for the noon of the nineteenth century.

Addicted to moralizing, both from natural disposition and from weekly vocation, as I walked through the Fair grounds with their centre of fruits, flowers and handiwork, and their suburbs of sheep and oxen, I saw much to suggest serious thoughts and devout thanksgivings.

At first I did not heed the scene as a whole. Its parts absorbed my attention. Many were their lessons. The ox taught me patience, and the cow generosity; every domestic animal preached on the beauty of faith. I then realized how successfully the Bible has interwoven its sacred teachings with common duties and household scenes. Certain herbs and flowers started a train of thought, swifter than any "lightning express" of modern times. In an instant, it carried me back to Adam—the first gardener—and his early home in Paradise; to the agony of the Savior in Gethsemane, and to his grave in the new tomb in the garden. A few sheep hinted of righteous Abel, and his accepted offering of the firstlings of his flock; of the pastoral life of the sweet singer of Israel, with his most moving psalm—"The Lord is my Shepherd; I shall not want;" and of that Anointed One, who said: "I am the Good Shepherd, and I lay down my life for the sheep." A

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cluster of grapes brought up memories of Noah, who "began to be a husbandman, and planted a vineyard;" (alas! that he became so degraded and dishonored by the product of his own wines,) and those immortal words of the Son of God: "I am the vine—ye are the branches;" "Do this in remembrance of me." More than thrice did I hear a cock crow as loudly as that "which of old startled the penitent Peter." Standing near a hive devoted to those insects, whose name is synonymous with industry, I wondered if, in some unrecorded sermons, the Savior, who came so near exhausting rural imagery, did not make the bee his frequent text. Certainly, it suggested themes worthy of the lips of the holy speaker. It discoursed of faith in man, favorite topic of the tongue, most God-like trait of the character of Jesus.

"The honey-bee that wanders all day long
The field, the woodland, and the garden o'er,
To gather in his fragrant winter store,
Humming in calm content his quiet song,
Sucks not alone the rose's glowing breast,
The lily's dainty cup, the violet's lips,
But from all rank and noisome weeds he sips
The single drop of sweetness ever pressed
Within the poison chalice. Thus, if we
Seek only to draw forth the hidden sweet
In all the varied human flowers we meet,
In the wide garden of Humanity;
And, like the bee, if home the spoil we bear,
Hived in our hearts, it turns to nectar there."

My mind was not occupied long with the details of the Fair. It soon rose to the moral of the whole scene. Looking over the array of goodly products of the earth, and the dense throng of sturdy kings of the soil, and fair queens of the dairy, I was moved to feelings of great gratitude to God, for his abundant supply of our temporal wants; for the wise providence of Him who has so ordered the affairs of this world, that seven-eighths of all civilized communities shall be devoted to agricultural pursuits—and for this grand annual festival, in honor of that religion, which preaches peace on earth and good will to men.

First: I shall speak of gratitude for the earth and its fruits. If I had had an acquaintance, troubled by atheistic doubts, or one unable to believe in the goodness of God, I should have invited him to accompany me to the Fair Ground. Single proofs of design in the construction of the Universe, are not sufficient to give unto all minds a firm and broad foundation for faith; but when multiplied and accumulated, such

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proofs are literally overwhelming. Who, that marked the adaptation of the ripe grain, luscious fruit, and lovely flowers to the wants of man's body, and the love of beauty in his soul, could believe that this provision was made by blind chance, or happy accident? Who, that remembered how easily our Maker could have sustained human life, by food, tasteless, or nauseous even; and made the earth a safe dwelling place, though clad in one unvarying robe of black or drab, could have refrained from confessing, that the pleasures of the table, and the delights of the eye, are indisputable proofs of the goodness of God? I was grateful to the Fair. I thank its managers for these familiar, yet ever fresh and convincing evidences, that the best name for the Creator is Love! Consciously, or unconsciously, they were missionaries of cheering views of the character of God.

In the second place, as I have intimated before, I was moved to gratitude, by the thought, that God has so ordered the affairs of this world, that in all civilized nations, a vast majority of the people are devoted to rural pursuits. Every man who loves his race, must recognize the hand of a wise and good Providence, in the evident necessity for millions of farmers. There is no nobler, no more inviting calling than that of the tiller of the soil. Healthful and manly, it is also favorable to independence, freedom and religion.

Even here in this new country, in spite of those violent disorders to which settlers are liable, one can hardly avoid noticing the contrast between the bodily vigor of men of out-door occupations, and those of sedentary habits. With muscles strengthened by habitual toil, one class can endure exposure, under which the other would soon sink to an untimely grave. The farmer does not set the laws of health at defiance, by grudging the short half hour allotted to a meal, nor does he convert night into day, with the illusion of brilliant gaslight and midnight dinners. He is not chained to some counter or desk, to pass the livelong day in measuring ribbon and computing interest. Rising with the birds, he goes forth to his manly labors, inhaling the pure air of heaven, and working in the eye of the great Sun himself. His nights bring no restlessness and exhaustion—but refreshing repose, and balmy sleep. Pack the human race into cities, providing them with food by manna from on high, and the average duration of life would become alarmingly short. The health of our towns depends in no slight de-

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gree, upon the infusion of fresh and vigorous inhabitants from the open country.

Life in the fields is formidable to independence. Where great numbers of men are crowded within a few square miles, custom becomes law, and fashion a tyrant. A few of the gifted, or wealthy, utter all the original ideas, and perform all the spontaneous acts. The vocation of the rest is to echo and to imitate. Not so with the farmer—he is, almost literally, his own master. His individuality is in little danger of being so rounded by this fashion, and so squared by that conformity as to be entirely and forever lost. Ruler of his little domain, he acquires the dignity and the repose of a sovereign. Dependent only upon an annual market, where he is morally certain of a living price, if out of debt, he asks no favor of banks, tariff, or dispenser of official patronage. He thinks for himself, and he dares to act according to his own standard of propriety and rectitude. I know that this rustic independence is sometimes annoying, but in a world of imitation where singularity is considered worse than sinfulness, some decision of character is considered refreshing.

The country is the peculiar abode, the favorite home of freedom. I would not wrong the town. I remember many acts of courage, and self-sacrifice, in the cause of human rights, performed by men who exchanged the pen for the sword; but I assert a well known fact when I say that liberal principles fare best in the open land. The battles of the Revolution were fought and won by patriot farmers, and at this day, when the money power is so dominant, when it sways the Senate, and awes the pulpit, making peace or war at its nod, and treating eternal justice as of less importance than the market, I thank God that in the country, where men are enriched and ennobled by simple habits and honorable toil, where the heart can keep its sympathies fresh, and its fountains of mercy unsealed and unchoked, there is still some regard for divine laws.

> "That there at least an earnest sense,
> Of human right and weal is shown;
> A hate of tyranny intense,
> And hearty in its vehemence,
> As if a brother's pain or sorrow were one's own."

Yes, the farmer's fireside is a school of freedom. The farmer's heart is true to humanity. While it continues to beat with strong and gener-

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ous pulsations, we need not despair of the Republic—we need not despair of the race.

Life in the country is eminently favorable for religious impressions. I know that cities contain splendid churches, and eloquent preachers, and the persuasive tones of sonorous bells, and the sweet incense of solemn prayers do seldom cease. But after all, these human devices are not worthy of comparison with

> "That cathedral, boundless as our wonder,
> Whose quenchless lamps the sun and moon supply,
> Its choir the winds and waves, its organ thunder,
> Its dome the sky."

In the city, we are surrounded by second causes. On the farm, we receive spiritual influences at first hand. In churches, we see and hear the priest. Under the open sky, we are brought face to face with God. Every object around us is fresh from His forming hand, and still redolent of divinity. Who can look abroad upon a landscape, as it is lighting up with the rays of the ascending sun, or gaze over the same scene as twilight darkens into gloom, without deep and pious emotions? Who can look aloft to the broad, unbroken expanse of heaven—glittering with unnumbered stars, without thoughts of Him whose almighty arm preserves order among the celestial hosts? In the town, the soul can always find excitement in amusements and society. In the solitude and quiet of rural districts, it has to make a companion of God.

Practical righteousness, as well as devotional feeling, find a noble sphere in the country. How direct and irresistible are the appeals for benevolence! In large towns, persons living in the same block are strangers to each other. Within ten rods of your comfortable homes, the wail of sorrow, and the terrible cry of famine may be uttered, without your being the wiser. Citizens are too apt to echo the inhuman cry of Cain, "Am I my brother's keeper?" In farming districts it is not so. There, a neighbor's wants cannot be hidden. There, a fellow being's sighs are heard and heeded.

In the third place, I was moved to gratitude, by the reflection that an Agricultural Fair is a triumph of Christianity. In the olden time men were not totally indifferent to rural pursuits. The Egyptian deified the ox. The Roman boasted of the skillful husbandry of famous generals. When Europe was almost shrouded in intellectual darkness,

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Thomas a'Becket, Archbishop of Canterbury, used to join in reaping corn and making hay. But it is only of late years that the arts of peace have received due honor. In the classic age, Ceres had her temples, but Mars was a more popular deity. While chivalry lasted, crowds met, not to witness a display of products of the soil and the loom, and for friendly matches between drivers of the plough, but to look on at feats of arms, or take a part in mimic battles. The arts of war and destruction were preferred to the arts of peace and preservation. Now, thanks to the religion of Jesus, the anniversaries of human slaughter are less frequent and less splendid, while the honor that once belonged exclusively to the warrior, is often given to the ablest ploughman, and the most skillful reaper. I hail the gradual coming of the Kingdom of the Prince of Peace, with exceeding joy. May it continue to advance, until, throughout the wide world, "they shall beat their swords into ploughshares, and their spears into pruning hooks. Nation shall not lift up sword against nation—neither shall they learn war any more."

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REPORTS

OF

COUNTY AGRICULTURAL SOCIETIES,

FOR THE YEAR 1853.

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REPORT

OF THE BRANCH COUNTY AGRICULTURAL SOCIETY.

J. C. HOLMES, Esq., *Sec'ry Mich. State Agr'l Society:*

The Second Annual Fair of the Branch County Agricultural Society was held at Coldwater, on the 11th and 12th days of October, 1853. The weather was fine, the arrangements complete, and the number of entries large; all of which, together with no small degree of enthusiasm on the part of the community, contributed to produce an exceedingly interesting exhibition. The success which has thus far attended the operations of the Society, seems to have dispelled the doubts and misgivings which many entertained at its formation. The zeal and interest manifested by our farmers and others, tell in unmistakable terms the estimation they regard the work in which they are engaged; and even now can we see its fruits in the spirit of emulation, and the desire to excel, which it is creating, and which must certainly result in improvement.

J. D. W. FISK, *Secretary.*

Coldwater, March 9, 1854.

LIST OF PREMIUMS.

CLASS I.—SHORT HORNS.

Best bull, 4 years old,	1st	premium,	Benj. H. Smith,	$5 00
2d " 4 "	2d	"	G. P. Stephens,	3 00
Best cow, 4 years old,	1st	premium,	E. Leland,	4 00

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CLASS II.—DEVONS.

Best bull, 4 years old,			1st	premium,	F. V. Smith,	$5 00
"	1	"	1st	"	E. M. Crippen,	3 00
"	3	"	1st	"	Darwin Wilson,	5 00
"	calf,		1st	"	F. V. Smith,	2 00
2d "	1 year, old,		2d	premium,	John Allen,	2 00
2d "	calf,		2d	premium,	C. H. Williams,	1 00
Best cow, 4 years old,			1st	premium,	F. V. Smith,	4 00
2d "	4	"	2d	"	E. M. Crippin,	3 00
3d "	4	"	3d	"	"	Transactions.
Best cow, 3		"	1st	"	"	3 00
Best heifer, 2 years old,			1st	premium,	John Allen,	3 00
2d "	2	"	2d	"	C. H. Williams,	2 00
Best "	1	"	1st	"	E. M. Crippen,	3 00
2d "	1	"	2d	"	John Allen,	2 00
Best calf,		1st	premium,	E. M. Crippen,		2 00
2d "	2d	"	John Allen,			1 00

CLASS III.—GRADES AND CROSS OF BLOOD STOCK.

Best bull, 4 years old,			1st	premium,	James Pindle,	5 00
2d "	4	"	2d	"	Isaac Middaugh,	3 00
Best "	2	"	1st	"	J. H. Hard & Son,	3 00
Best "	1	"	1st	"	Loyd H. Sims,	3 00
2d "	1	"	2d	"	W. B. Mason,	2 00
Best "	calf,		1st	"	Geo. Hawley,	2 00
Best cow, 4		"	1st	"	A. C. Fisk,	4 00
2d "	4	"	2d	"	A. Chandler,	3 00
Best "	3	"	1st	"	F. V. Smith,	3 00
2d "	3	"	2d	"	E. Leland,	2 00
Best heifer, 2 years		old,	1st	premium,	Wm. B. Sprague,	3 00
2d "	"	"	2d	premium,	E. Leland,	2 00
Best "	1 year	"	1st	premium,	Geo. Hawley,	3 00
2d "	"	"	2d	premium,	David Kilburn,	2 00
Best calf,			1st	premium,	Darwin Wilson,	2 00
2d "			2d	premium,	F. V. Smith,	1 00

CLASS IV.—NATIVE CATTLE.

Best cow, 4 years old,			1st	premium,	H. M. Wright,	4 00
2d "	"	"	2d	"	R. D. Decker,	2 00
3d "	"	"	3d	"	Horace Lewis,	Trans.

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Best heifer, 3 years old, 1st premium, Geo. Hawley, ... $3 00
" 2 " 1st " David Holmes, ... 3 00
2d " 2 " 2d " H. M. Wright, ... 2 00

CLASS V.—WORKING CATTLE, OXEN AND STEERS.

Best yoke working oxen, 4 years old, 1st prem., Alanson Squares, 5 00
2d " " 4 " 2d " Wm. Keagle, ... 3 00
Best " steers, 3 " 1st " F. V. Smith, ... 3 00
2d " " 3 " 2d " " " " ... 2 00
Best " 2 " 1st " A. C. Fisk, ... 3 00
" " 1 " 1st " Geo. Hawley, ... 2 00

CLASS VI.

Best fat cow, L. R. Austin, ... 3 00

DISCRETIONARY.

For skill in training steers, Orlando Avery, ... Vol. Trans.

CLASS I.—HORSES FOR ALL WORK.

Best stallion, 4 years old, 1st prem., E. W. Bovee, ... 5 00
2d " 4 " 2d " John Hall, ... 3 00
3d " 4 " 3d " A. Maxfield, ... Trans.
Best " 3 " 1st " H. D. Mudge, ... 3 00
2d " 3 " 2d " A. H. Cooson, ... 2 00
Best " 2 " 1st " James Clisby, ... 3 00
2d " 2 " 2d " S. H. Abbott, ... 2 00
3d " 2 " 3d " H. C. Lewis, ... Trans.
Best " 1 " 1st " John Pridgen, ... 2 00
2d " 1 " 2d " Henry Lockwood, ... 1 00
3d " 1 " 3d " C. Vanaiken.

BROOD MARE AND COLT.

Best, Libius Rowe, ... 3 00
2d, A. C. Fisk, ... 2 00
3d, Elisha Williams, ... Trans.

MATCHED AND SINGLE HORSES.

Best matched horses, 4 years old, 1st prem., Alex. Fox, ... 5 00
2d " 4 " 2d " A. C. Fisk, ... 3 00
3d " 4 " 3d " E. D. Sterns, ... 2 00
Best matched colts, 2 " Foreign.
" " 3 " 1st " C. H. Beach, ... 3 00
2d " 3 " 2d " J. B. Haviland, ... 2 00

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Best single horse,	4 years old,	1st prem.,	C. H. Dunks,	$3	00
2d "	4 "	2d "	B. Norris Howe,	2	00
Best "	3 "	1st "	S. H. Abbot,	3	00
2d "	3 "	2d "	James Peterson,	2	00
3d "	3 "	3d "	John Allen,		
Best colt,	2 "	1st "	Jesse Olney,	2	00
2d "	2 "	2d "	Darwin Wilson,	1	00
3d "	2 "	3d "	Henry Pierce,	Trans.	
Best "	1 "	1st "	Jessey Olney,	2	00
2d "	1 "	2d "	L. R. Austin,	1	00

CLASS II.—DRAUGHT HORSES.

Best stallion 4 years old, 1st premium,	James Clisby,	5	00
2d " "	2d "	M. L. Smead,	3	00
Best pair draught horses 4 years old,	Lyman Witter,	5	00
2d " "	"	D. Culver,	3	00

SHEEP.—FINE WOOL.

Best buck, E. B. Williams, awarded certificate, he having drawn first premium last year.

Best buck, 2 years old and over,	Geo. Boon,	$2	00
2d " 2 " "	Wm. B. Sprague,	1	00
Best " 1 " "	Anson Nickols,	2	00
2d " 1 " "	Geo. Boon,	1	00
Best " lamb,	E. B. Williams,	1	00
Best pen ewes,	A. Nickols,	3	00
2d "	Nelson Baker,	2	00
Best fat weather,	W. B. Sprague,	1	00

LONG WOOLED.

Best long wooled buck,	J. Pridgen,	2	00
" " lamb,	"	1	00

HOGS.

Best boar, large breed,	John Allen,	3	00
2d " "	Nelson Baker,	2	00
Best " small breed,	C. J. Wilkins,	3	00
Best sow, large "	J. H. Hard & Son,	3	00
" " and pigs, large breed,	C. H. Williams,	4	00
2d " " "	John Allen,	3	00

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Best sow, small breed, Sterling Perkins,	$3 00
2d " and pigs, small breed, Nelson Baker,	3 00

POULTRY.

Best lot of Chittagongs, Hiram Baker,	2 00
2d " " D. C. Morehouse,	1 00
Best lot of Shanghais, D. B. Benton,	2 00
2d " " E. M. Crippen,	1 00
Best lot of Polands, E. R. Spear,	2 00
2d " " W. B. Sprague,	1 00
Best lot of Cochin Chinas, D. B. Benton,	2 00
" " Mixed, D. B. Benton,	1 00
2d " " F. V. Smith,	50
Best lot of Brahma Pootra, E. M. Crippen,	1 00
" " English, A. C. Fisk,	1 00
" " any other variety of 6, W. B. Sprague,	2 00
" " Dorkings, D. B. Benton,	2 00

FARM IMPLEMENTS.

Best farm wagon, Ira Markham,	2 00
Best fanning mill, W. P. Sevanway,	1 00
Best straw cutter, Shoudler, Mockridge & Co.,	2 00
Best double harness, Isaac Pierce,	2 00
Best single carriage harness, Isaac Pierce,	2 00
Best corn planter, Shoudler, Mockridge & Co.,	2 00

PLOWS AND PLOWING.

Best sod plow, Starbuck's, Shoudler, Mockridge & Co.,	2 00
Best plowing with horses, A. C. Fisk, Mr. Long plowman,	5 00
2d " with oxen, Mr. Foster,	3 00

BUTTER, SUGAR, HONEY, BREAD, &C.

Best 10 pounds butter made in June, Jesse Olney,	3 00
2d 10 " " " " Henry Pierce,	2 00
Best 10 " " " this fall, Ed. Quagly,	3 00
Best 10 " maple sugar, H. D. Miller,	1 00
Best 10 " honey, L. S. Daggett,	1 00
2d 10 " " Geo. Tripp,	50
Best specimen crackers, Levi Daggett,	1 00
Best specimen bread, Mrs. J. G. Parkhurst,	1 00
2d " " Miss Marsella Hickok,	50

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Best lot cakes, wine, pastry, and pickles, presented by Mrs. Jane Lee,	$1 00

DOMESTIC MANUFACTURES AND NEEDLE WORK.

Best 10 yards rag carpet, Mrs. Isaac Pierce,	1 00
2d 10 " " Mrs. Geo. Hawley,	50
Best pair woolen hose, Mrs. E. Marsh,	50
2d " " " Mrs. Henry Pierce,	25
Best pair mittens, Mrs. W. L. Leach,	50
Best patch work quilt, Mrs. John Chandler,	1 00
Best white quilt, Miss Eleanor Fisk,	1 00
2d " " Mrs. Dunk,	1 00
Best coverlet, M. L. Smead,	50
Suit child's clothing, embroidered, Janette A. Fisk,	50
Two gent's stocks, Miss J. G. Warren,	50
Box needle work, Mrs. N. D. Skeels,	50
Embroidered cap, R. Holmes,	25
One crochet tidy, Miss Helen M. Brown,	50
One shell " Miss Mary Brown,	50
One embroidered bonnet, Mrs. R. F. Mockridge,	50
" " apron, Mrs. F. V. Smith,	50
Best specimen worsted work, Mrs. L. D. Crippen,	50

FLOWERS.

Best and greatest variety of house plants, D. J. H. Beach,	1 00
Case wax flowers, fruit and grain, Miss F. A. Marsh,	1 00
Specimens of cotton plant, Henry Selleck,	50
Vase of flowers, Miss Armanda Pond,	50
" " Miss Ann Marie Miller,	50
" " Miss Warren Whitcomb,	50
" " Mrs. N. T. Waterman,	50

GRAIN, FLOUR AND SEED.

Best half bushel beans, Leach & Warren,	1 00
Best half bushel peas, Leach & Warren,	1 00
Best 12 ears of corn, James Clisby,	1 00
2d 12 " George Hawley,	50
Best half bushel barley, Darwin Wilson,	1 00
" " winter wheat, Jesse Olney,	2 00
2d " " winter wheat, P. Sprague,	1 00

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Best bbl. flour, G. E. Crippen, ... $1 00
Best half bushel Timothy seed, Geo. Tyler, ... 1 00
Best 12 ears Dutton corn, D. Rice, ... 1 00

FRUIT.

Best 12 varieties of winter apples, Geo. Tripp, ... 2 00
2d best 12 varieties of winter apples, Wm. Demming, ... 1 00
Best 12 " fall " E. Leland, ... 2 00
Best collection of pears, Geo. Tripp, ... 1 00
" peaches, C. Wendell, ... 1 00
Best peck of quinces, Geo. P. Stephens, ... 1 00
Best collection of grapes, Mrs. H. C. Gilbert, ... 50
Best sample strawberries, S. F. Bullard, ... Recommended.
" cranberries, L. D. Halsted, ... Discretionary.

VEGETABLES.

Best 12 beets, Leach & Warren, ... 50
Best 6 cabbage heads, Leach & Warren, ... 50
Best 12 parsnips, " " 50
Best peck onions, " " 50
Greatest variety potatoes, " " 1 00
Best peck tomatoes, " " 50
Best 12 vegetable oysters, " " 50
Best 6 winter squashes, " " 50
Best and greatest variety roots for cattle, Leach & Warren, ... 1 00
Best 3 water-melons, D. Wilson, ... 50
Best 12 carrots, Sterling Perkins, ... 50
Best half bushel sweet potatoes, H. D. Miller, ... 50
Best 6 pumpkins, Ann Wood, ... 50
Best 12 white turnips, David Tripp, ... 50
" blood beets, D. Culver, ... 50
Best 6 citrons, S. P. Noyes, ... 50
Best half bushel table potatoes, E. C. Lippincott, ... 50
" " feeding potatoes, " 50

MECHANICS.

Best specimen tin ware, Beach & Mockridge, ... 1 00
" marble work, J. H. Hard & Son, ... 1 00
" chairs, D. Carson, ... 1 00

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Best specimen axes, Jesse Burns, ... $1 00
" guns, R. Wilder, ... 1 00
" boots and shoes, D. Smith, ... 1 00
" printing, E. J. Hard, ... 1 00
" edge tools, (foreign,) Beach & Mockridge, .. Discretionary.

MISCELLANEOUS.

1 buggy, (foreign,) E. H. Dunks, ... Recommended.
1 " 1st prem., A. Maxfield, ... 2 00
1 " 2d premium, L. Howe, ... 1 00
1 Rockaway, P. H. Crippen, ... 2 00
1 two-horse carriage, E. C. Sterns, ... 2 00
1 bird cage, E. C. Williams, ... Transactions.
Best specimen of Architectural Drawing, M. H. Parker, .. "
1 side saddle, S. H. Abbott, ... 1 00
2 Landscape Paintings, in oil, D. B. Benton, ... 2 00
Grape wine, Ami Wood, ... 50
" E. R. Spear, ... Transactions.
" J. O. Pelton, ... 1 00
Fancy sign, Farnham, ... Transactions.
10 yards linen, Levi Daggett, ... 1 00
Specimen of daguerreotype, H. Baker, ... 1 00
Log-wagon and log, N. W. Bryant, ... 1 00
Specimen of leather, N. W. Johnson, ... 3 00
1 sulky, J. H. Marsh, ... 2 00
Shell box, D. C. Morehouse, ... Transactions.
4 alum baskets, C. H. Williams, ... "
1 shell basket, N. W. Johnson, ... 1 00
Surgeon's splints, J. H. Beach, ... 1 00

Articles of foreign manufacture, not entitled to premium, but recommended as superior:

Patent weather strip,	M. H. Parker.
Cider press,	D. W. Palmer.
Cheese "	"
Paper "	"
Apple grater,	"
Farmer's friend,	Beach & Mockridge.
Thermometer churn,	"

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Churn,	Aaron Edly.
Grass-seed sower,	D. R. Houly.
Gun, caps and wad,	R. M. Wilder.
Cottage stove,	Albert Chandler.

FARMS.

The committee awarded the first premium to Anson Nickols, . . $10 00

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REPORT

OF THE CASS COUNTY AGRICULTURAL SOCIETY.

To the Secretary of the State Agricultural Society:

SIR—At the Annual Meeting of the Agricultural Society for this County, Walter G. Beckwith, Esq., was elected President, Pleasant Norton, Treasurer, and David M. Howell, Secretary. The Annual Address was delivered by the Hon. G. B. Turner, a copy of which I herewith enclose to you, with list of premiums.

Yours respectfully,

D. M. HOWELL, *Secretary.*

Cassapolis, Nov. 23, 1853.

LIST OF PREMIUMS.

Premiums awarded at the Annual Fair of the Cass County Agricultural Society, 1853:

Horses for all work, over 3 years old—first premium to Isaac Hull; second premium to Henry Houser.

Three year old mares—first premium to P. Mars; second to Daniel Swank.

Three year old geldings—first premium to Dr. Robertson; second to J. P. Coats.

Draft horses—first premium to Henry Wilson; second to L. Blackmar.

Matched horses—first premium to W. G. Beckwith; second to J. S. Reese.

Saddle horses—first premium to Finney H. Jones; second to Samuel Morris.

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Three year old stallions—first premium to Robert Shidler; second to Isaac H. Shingledecker.

Buggy horses—first premium to John Nixon; second to D. M. Howell.

Blooded stallion—first premium to Russel Cook; no competition.

Span of three year old horses—first premium to Levi Norton; no competition.

Blood mares—first premium to P. Mars; second to Isaac Hull.

Stallions, two years old—first premium to John Alexander; second to George Rathbone.

Stallions, one year old—no entries.

Geldings, two years old—first premium to Henry Smith; no competition.

Mares, two years old—first premium to Thomas Tinkles; second to Hamilton White.

Sucking colts—first premium to Isaac A. Huff; second to Stephen Jones.

Matched colts—first premium to Joseph H. Parker; no competition.

Mares, one year old—first premium to Lewis H. Redfield; no competition.

Number of entries—64.

NOTE.—For obvious and sufficient reasons, it was deemed advisable to adopt a new list of premiums on horses, by adding eight new ones; this was the cause of some mistakes. The above list is correct.

Durham bull, over two years old—first premium to Wm. Jones; second to P. Mars.

Devon bulls, over two years old—first premium to Stephen D. Wright; no competition.

Grade bulls, over two years old—one entry, Lewis H. Redfield.

Durham cows—first premium to Charles Jones; no competition.

Grade cows—first premium to Charles Jones; no competition.

Calves—first premium to Joseph Jones; second to Isaac A. Huff.

Working oxen—first premium to David Brady; second to Daniel McIntosh.

Three year old steers—first and second premiums to John Nixon.

Yearling steers—first premium to Thomas Tinkler; no competion.

Bulls under two years old—first premium to Reuben Allen; second to J. P. Coats.

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Heifer under three years old—first premium to Charles Jones.

NOTE.—But one premium was offered for bulls under two, and heifers under three years old—the Committee saw fit to add another. I understood from them they intended to make a class of Durhams, and one of Devons, and give the first premium on Durhams, to J. Gage; the second to J. P. Coats. The report, however, did not contain these latter alterations.

Swine—premium for heaviest hog, to Hiram Jewell.

Sheep, French Merino bucks—first premium to Wm. Jones; no competition.

Spanish Merino bucks, first and second premiums to Charles Jones.

Cross of French and Spanish Merino—first premium to Wm. A. Bacon; second to Wm. Jones.

Poultry—committee award a diploma to Israel C. Sweet, for specimens of Shanghai breed.

Agricultural implements—committee award a diploma to H. M. Herrick for fanning mill.

Dairy committee award a diploma to Ellen Foster, for roll of butter.

Domestic Manufactures—committee award a cash premium to Mrs. D. M. Howell, and C. Kingsbury; and diplomas to D. Carlisle, Mrs. J. S. Reese, L. D. Tompkins, Mrs. M. E. Thomas, and W. G. Beckwith.

Miscellaneous articles—committee award diplomas to David Young, E. Harter, S. S. Chapman, L. Reams, J. P. Osborn, D. Shidler, S. D. Wright, and W. Earl.

Ornamental work—cash premiums are awarded to Miss Louisa Fuller, and Miss A. E. Thomas; and diploma to Mrs. C. Kingsbury, Miss Mary J. McIntosh and Mrs. Tabor.

Fruits—diplomas are awarded to L. D. Tompkins, M. J. McIntosh, J. A. Huff, B. Mead, J. Rudd, J. P. Osborn and J. Gage.

Grain—copies of the Transactions of the State Society, are awarded to B. F. Harrison, J. Nixon and J. Rudd.

D. BLACKMAN,
Secretary.

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ADDRESS

DELIVERED AT THE THIRD ANNUAL FAIR OF THE CASS COUNTY AGRICULTURAL SOCIETY, HELD AT CASSAPOLIS, ON FRIDAY AND SATURDAY, SEPTEMBER 23D AND 24TH, 1853.

BY G. B. TURNER, ESQ.

Ladies and Gentlemen:

Having been appointed by the Executive Committee of our County Agricultural Society, to address you upon this occasion, I enter upon the duty assigned me with much diffidence—feeling that the task might have been confided to one, in all respects better fitted than myself, to do it justice; to one, whose superior knowledge and experience in all that pertains to agriculture, is known and acknowledged, as well by his auditors, as by that community in the midst of which he lives, and gives daily, practical evidence of his ability to instruct or interest. An address, coming from such a source, could not fail of being peculiarly interesting and instructive to the working men of our county; as it is, I can only lay before you the partial results of my reading and observation, together with that very moderate experience which a novice in the science of agriculture is supposed to possess.

Were I able to discuss thoroughly and understandingly, the principles upon which this important science rests, the discussion would occupy far more time than you could profitably spare, at a single sitting. You can, at your leisure, when the duties of your calling do not claim your attention in the field, study them in books, in essays, and agricultural journals; and when called to active labor upon your farms, you can, by well tried and judicious experiments, not only prove the usefulness of your reading, but you can add to that general stock of information, which makes up the aggregate of agricultural knowledge.

Agriculture is defined to be, "the cultivation of the ground for the purpose of producing vegetables and fruit for the use of man and beast; the art of preparing the soil, sowing and planting seeds, dressing the plants, and removing the crops."

The earth, in a state of Nature, unless chilled by an ungenial climate, possesses a certain degree of fertility, so as to produce plants more or less suitable for the subsistence of man and beast; but its spontaneous productions are small in amount, compared with those which can be drawn

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from it by man's industry and intelligence; and those productions are not sure to be of the kinds which are most needful. Savage nations usually rest content with the natural produce, and they are accordingly found to be few, in proportion to the surface they occupy, and generally in the lowest state of misery and degradation. But wherever man has possessed any intelligence, he has applied himself to cultivate the earth, so as to make it capable of supporting, in comparative comfort, a larger amount of population.

I may truly say, wherever you find a people without any well defined notions of a Creator, there you find them steeped in barbarism, shrouded in heathenish darkness. There, the arts, sciences, and manufactures are unknown; there, agriculture finds none to put forth her claims, or labor in her fields; there, Nature throws up from her bosom, the grains and fruit which such a people require for a bare subsistence, and with this they seem content. Yet this contentment is fatal—mentally and physically fatal. They soon fall into decay—they wither, die, and disappear from among the nations of the earth, and scracely leave a trace behind to tell that they once lived and moved on mother earth. Examples all over the habitable globe, bear me out in the assertion.

On the other hand, wherever you find a people who admit the providence of God their Creator—who rely upon Him and His providence for the blessings they enjoy—there you find a people learned in the arts and sciences. You find them industrious, contented, happy; amply endowed with those qualities, mental, moral, and physical, which contribute to man's happiness and comfort. They worship the true and living God, "under their own vine and fig tree," and there is none to molest or make afraid. It is among such a people that the science of agriculture is studied—among them it has reached its present state of perfection. The husbandman, availing himself of the many privileges which an enlightened governmental policy affords, educates himself, his sons, and daughters, to govern the soil, the flocks, the herds, and the dairy, so as to produce the largest possible amount from each, to support an increased and growing population.

The occupation of the farmer is an honorable, an exalted one in society. As he learns to analyze soils, to ascertain their properties, their adaptation to different grains, grasses, and plants, it fits him to govern families, communities and States. His calling involves the study of Na-

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ture and the laws by which her productions are governed; it brings into exercise the best faculties of the body and mind; it strengthens and invigorates both. It matures the man, and prepares him to govern and direct in whatever position in life he may be placed. It is only in countries most enlightened—it is only where civil and religious liberty has attained its highest perfection, that agriculture is thus regarded, or her votaries thus exalted. It is only here, in our own free, happy America, that the husbandman meets with the reward to which his intelligence, his industry, his virtue and patriotism, entitle him. With us, no post of honor or profit is beyond his reach. He may be called by his countrymen to leave his plow and occupy a seat in the Representative Hall, upon the Judge's bench, or, it may be, to preside over the destinies of more than twenty-three millions of people.

If these things be true, what powerful inducements are held out to the American farmer to educate heart, mind and body! Certainly none greater could be offered. Go search the wide world over, then tell me if you can, of that land beneath the sun more favored than our own—possessing to as great an extent those elements of usefulness and greatness which indicate the future power and grandeur of a nation. Our territory, now almost limitless in extent, is still growing, expanding, absorbing; and will continue to grow and expand, until every jot and tittle of contiguous territory is drawn within the embrace of our Federal Union. The very nature of our social compact—the progressive spirit of our institutions—the indomitable energy of our people, all point with unerring certainty to this result; such is our destiny—let those doubt who will.

Something over two hundred years ago, our country was a vast unbroken wilderness; its noiseless solitudes were broken only by the Indian war whoop, the howl of wild beasts, the ripple of the gentle waterfall, or the rushing of the mighty cataract.

> "Before these fields were shorn and tilled,
> Full to the brim our rivers flowed,
> The melody of waters filled
> The vast and boundless wood;
> And torrents dashed, and rivulets played,
> And fountains sported in the shade."

Then, ours was a continent of majestic forests, dotted here and there with inland seas, and coursed by mighty rivers. But now, her com-

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mercial marts dot the Atlantic coast through nearly twenty degrees of latitude, and the Pacific, through at least fifteen. She possesses every variety of soil, climate and productions; her mighty rivers and inland seas, her immense railways and canals, forming a net-work which covers the whole Union, all, teeming with the products of her soil and the handiwork of her mechanics, attest the magic change which has come over her.

Numberless cities and villages dot her surface; schools, academies colleges and churches, are strewed with a generous hand, over her whole length and breadth; all these are monuments of her present greatness, and point significantly to her future.

The question might well be asked, to whom are we indebted for this unexampled prosperity of the nation. My response would be: to the working men of America; to her farmers and mechanics.

Driven from their father land by the iron hand of despotism, their sires sought a resting place in the wildwoods of America; they leveled forests, and cultivated fields, constructed railways, built up cities and villages, reared churches and seminaries of learning; it was they who built up your Republic, and first gave the stars and stripes to the breeze; and it is to their sons, who toil with hard hands and honest hearts, you must look for its permanency through the future.

As much as the American farmer has done to elevate himself in the scale of intellect and usefulness; as much as he has done to build up a name for his country, and give character to his occupation; still there remains much more to do, if he would maintain his high position.

He cannot with safety, in this age of progress, fold up his arms and declare there is nothing more for him to do—that his country is prospered; that he has only to plow, and sow and reap, as did his fathers before him, and abundant harvests will be his reward. That philosophy which teaches that there is a point where mind and matter remain fixed and immovable, or rather, that there is a point in the lifetime of man, when the mind remains passive, when it neither improves nor looses any of its strength and vigor by inaction, is false and delusive. Man is continually advancing toward perfection, or he is continually retrograding. Natural things are constantly moving toward perfection, or they are falling into decay—there is no stand-still point.

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The husbandman is either developing new facts in agriculture, adding new light to the science, enriching the soil, multiplying her productions, or he labors only for a bare subsistence, and thus wastes his energies, buries his talent in the earth, and makes one of that number, who, in the foolishness of their hearts, declare there is nothing more for them to do, or learn.

But, my hearers, the very existence of our Society; the gathering together of the agriculturists and mechanics of our county, upon this occasion; the fine array of stock, grains, fruits, vegetables and implements of husbandry, which greet the eye, all afford ample testimony that you are not of this slothful and deluded number. Agricultural Societies are springing up in every county of every State in the Union. State Agricultural Societies are being organized. State Legislatures, feeling the necessity of fostering these important nurseries of agriculture and the arts, are lending legislative aid.

These facts assure me, that the interest felt by the American people in this ennobling science, is not abated or at the stand-still point, but is moving steadily and surely on. And who, I ask, should not feel an interest in the tillage of the soil, and in its productions?

Certainly, every one who eats bread, who wears or uses cotton, woolen or flax, is directly interested. The products of the soil sustain alike the rich and the poor, the king and the subject; their flocks and herds, all are dependent upon it.

Then, if a successful tilling of the soil be a matter of such vital importance to a people, should not that people, by every means in their power, encourage labor in every department of husbandry, systematize its minutest particulars, and place it first on the list of sciences? Such, every candid mind will admit to be the duty of the American farmer, such *is* the duty of the farmers of Cass county.

Instead of abandoning, as no longer worthy of attention, that soil from which he has for years derived a comfortable subsistence, and perhaps a competency, to seek a home still farther west, where the virgin soil has never been disturbed by the plow and the harrow, it would be far better for the country, and in the end better for himself, if he would look once more to the land he has impoverished by inconsiderate farming, and see if there is not still a chance to renovate it, to add to its productiveness, and to his own character as a tiller of the soil.

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Millions of acres in the United States at this time, present the sad spectacle of sterile fields and barren wastes; scattered over them you find dilapidated dwellings, roofless barns and prostrate fences. These are the signs of the slothful but greedy farmer, who vainly supposed that these sterile fields, once so rich and productive, would always remain so, without returning to them an equivalent for the rich harvests they had so long and so bountifully yielded. As well might he expect that the natural body could labor on, day after day, without rest and repose, and fail not in its amount of labor, as that any soil is so rich as to produce equally abundant crops from year to year, without proper manures and proper culture. It has been said that the individual who causes two spears of grass to grow where only one grew before, is entitled to be regarded as a public benefactor. I admit this conclusion, and beg leave to add that the individual who, by careless and pernicious farming, lessens the soil's ability to produce, though not legally guilty of pilfering, is, nevertheless, morally guilty of that offense; for he robs and destroys the best qualities of the soil, committed for a brief period to his charge, and in which the public as well as his family, hold an interest.

The man who settles upon land of acknowledged strength, possessing every essential element which makes up the sum total of a productive soil, and raises from it a good crop, is entitled to credit merely for the actual labor he expends in "putting in" and harvesting the crop. But the man who settles upon land abandoned by his neighbor as worn out, and devoid of goodness, and from it grows good crops, is not only entitled to credit for his labor, but for his superior intelligence, energy and usefulness. That man is indeed a public benefactor. To men of this character must be committed the task of reclaiming those barren wastes which are scattered over our north-eastern and middle States, and which are multiplying too fast in the great west. Fortunes are oftener made, and quicker, by such men, from such farms, than by those who till a good soil, to which nothing is added to keep it as productive as the proprietors found it.

The prevailing fault of western farmers, consists mainly in attempting to cultivate more land than they possess the ability to cultivate properly. Coming from the eastern, middle, or southern States, where land bears a price too great for their means, and settling upon the plains,

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prairies, or heavy timbered lands of the west, where farm lands are comparatively cheap, they fall into that common error, viz: the greater the number of acres that can be plowed and sown from year to year, without regard to the manner and mode, the better the prospect of becoming forehanded and wealthy. The result has always proven the fallacy of this idea. With a farm too large for his means, the farmer must skim over the soil carelessly; he must sow and reap carelessly. He has no time to study the theory of farming, or put in practice the valuable information he might glean from books. For want of time to properly distribute them, his manures are scattered wastefully about the premises, where they were originally deposited, instead of being spread over the land he annually robs. His buildings and fences show conclusively that time and money are wanting to put them in order. His cattle, sheep, horses, and swine, all of the poorest breeds, and in the poorest condition, ramble at will, upon the commons, to pick up a precarious living. Though he possesses three times the quantity of land and stock his thrifty and intelligent neighbor does, who lives hard by, still he cannot command as much money, or as many of the comforts of life. His farm is not worth as much, neither are his buildings or his stock. The unthrifty farmer raises no more upon three acres of his illy cultivated land, than the thrifty farmer does upon one acre of his well tilled land. The unthrifty farmer is, perhaps, unable to sell his farm for more than $10 per acre, while the thrifty farmer can take from $25 to $30 for his. The stock of the unthrifty farmer will not command as much in market, because not in as good condition, or as well selected, as his nighbor's. His grain will not bring as much, because he had not time enough to run it once more through the fanning mill; nor his wool as much, because he had not time to wash it properly.

Thus you see, there is more made, and with less trouble, from one acre well tilled, than from three poorly managed—that it is easier and far more profitable, ro raise good stock than poor.

The unthrifty farmer seems as desirous of having about him large and unmanageable flocks and herds, as he is of possessing a large unwieldly farm; and, indeed, his stock corresponds well in quality and condition, with his method or manner of farming—all poor, or seldom ever good, and *never* first rate, except by accident.

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The thrifty farmer, on the other hand, keeps no more stock upon his farm than it will support handsomely; his barns and sheds are in good repair, and large enough to shelter them well. His crops are carefully saved, and at the proper time—his cattle, sheep, horses and swine, are the best of the kind he can obtain in the country. He manages his entire stock with reference to improving their quality and condition. He thus improves their value and puts money into his pocket. In the management of his household, the same order and regularity is observable. He is no sluggard—with his family, he is up at the early rising of the sun, preparing for the labors of the day. Each member of his family has his or her part to perform; all engage in their respective duties with cheerful countenances, and willing hearts. You do not see his sons lounging about stores, taverns or grog shops, engaging in the idle gossp of the day. If the state of the weather does not permit out-door labor, you find them repairing and putting in order their farming implements, or adding to their stock of knowledge from some useful book or periodical. They hold, and truly, that *time is money*. Visit the family of the thrifty farmer, and you find contentment beaming from every face; his wife, his sons and daughters well dressed, though not extravagantly, meet you with that cordiality and natural grace which bespeak education and refinement. By refinement, I do not mean those affected manners which too often obtain in cities and villages; that are learned at fashionable watering-places; are taught by French dancing-masters, or are drawn from that mass of pestilential literature, termed works of fiction, which of late has flooded our land, corrupting and tainting the minds of our young men and women—such refinement as this, though covered with fashionable cloths and silks, must be regarded by sensible persons as useless and unbecoming. By refinement, I mean the exercise of those social qualities which make society desirable and interesting—that distinguishes the man and woman of sense, from the fop and the drawing-room butterfly—truly defined, it comprehends every virtue, every necessary and useful accomplishment which appertains to an enlightened and well ordered community.

The thrifty farmer seldom ventures beyond his means. He is seldom in debt. He provides for himself and family such attire as is appropriate to their calling and circumstances. He is as much the

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man of sense when in his cornfield, clothed in patched pants and tow frock, as when he dresses in the best broadcloth. In fact, he takes as much pride in dressing appropriately, as he does in seeing his fields and fence corners freed from brush, briers and noxious weeds. He liberally patronizes schools—his shelves are well filled with useful books and papers. Upon questions of political economy, he is about as well posted, as upon questions of domestic economy; yet to acquaint himself with the politics of the day, he does not neglect the more important duty of acquiring an accurate knowledge of the theory and practice of correct farming. Such, in brief, is a picture of the thrifty farmer; a picture of the unthrifty farmer would be the opposite of this.

It does not unfrequently happen that farmers of the latter class, by contact with thrifty farmers; by conversation, reading and observation, become convinced of the error of their ways; change their whole practice or mode of farming, and after a reasonable probation, are ranked among thrifty and progressive husbandmen.

Many of you recollect the history of the early settlement of Michigan. You will recollect also, that as late as 1839, the great majority of farmers, were, to use a very common expression, "heels over head in debt," to the merchants of the State; farming was then carried on upon a wild and visionary scale; immense fields of wheat and oats were poorly sown and poorly harvested; large, unwieldy fields were planted to corn—these were poorly tended, and the crop wastefully harvested. Each farmer seemed striving to get in more of every kind of grain than his neighbor, without reference to the mode or manner of getting it in. The wild grass of our wet marshes had usurped the place of clover and timothy; and in the estimation of our farmers, it possessed nearly all the nutritive qualities of both; and why? merely because the former grew spontaneous, and the latter required time, money and labor to grow it. All were desirous of getting rich, yet neglected to use properly the means within their power. They used the soil as if they deemed it inexhaustible; manures for land, if thought of at all, were considered as useless for enriching Michigan soil, as the light of a candle would be to the noonday sun.

A speculating mania had seized upon our farmers; wild lands and village lots were bought up eagerly at high prices, with the expectation of realizing fortunes from them in a short time. In the opinion of

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some, Alladin's lamp did not possess a charm more sure—more potent for riches, than the soil of Michigan. They were right in their conclusions, but in their premises, wrong. You had but to rub the wonderful lamp, and untold riches were at your command. They supposed that to mark out the soil carelessly, or rather, by going over a most unfarmer-like process, golden harvests would reward them—or they had only to mark out in the sand with a cane, at some street corner, a plat of their wild lands and village lots, puff them a few times, and sales were expected, and fortunes secured.

Their's was indeed a great mistake! they did not rub the soil deep enough, nor did they mark it out in the right spot, or puff in the proper place. They should have rubbed and marked their grain fields deeply with the plow, and puffed while removing cart loads of manure to enrich the land they were fast impoverishing; then their golden dreams might have been to a great extent realized.

A re-action took place; wild land and village lots suddenly lost their fictitious value, and fell, in some cases, even below their actual value—and with them fell the airy castles of the unthrifty farmer.

He found that the soil was not as productive as he at first imagined; he found that he had sown too much and reaped too little; that his land was running down, and the sorrel running up. With these facts staring him in the face, many of his class commenced the work of retrenchment and reform, and are to this day considered snug, intelligent, thrifty farmers, free from debt, and no longer money borrowers, but money lenders. Others continued obstinately to rob their farms from year to year, until they were rendered comparatively unproductive, then "pulled up stakes," and moved farther west, where they are doubtless engaged in the same disreputable business—robbing and pilfering from the soil.

Upon the whole, I may congratulate you, my hearers, that the opinion is fast gaining ground among us, that a well educated mind is as essential to qualify an individual to carry on farming operations successfully as it is to qualify one for a professor's chair, the bar, or the pulpit. So long as this opinion continues to gather strength, and so long as those high in authority feel and obey the dictates of such an opinion, we need not fear for the standing and condition of the American Farmer.

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In some parts of Europe, the husbandman is but a serf, a bondman; in other parts, he is regarded as a mere dependant. As a class, the farmers of Europe are ignorant of many of the practical and useful improvements which are being made in agriculture and the arts, in the new world. Purposely kept in ignorance by their rulers—seldom allowed to participate in the affairs of government—it is not strange they should prove wanting to a considerable extent in self-respect and manhood; nor is it strange that they should labor unremittingly to fill the coffers of those they call masters, while they receive but a tithe of their hard earnings. But here in our own country, we call no man master. Here, intelligence, virtue and industry, are the only true standards by which to estimate the man.

The unexampled facilities afforded by our system of common schools, places all upon an equality, so far as opportunities for educating the mind are concerned; and it is with pride I say it, the working men of our country during the last half-century, have shown themselves keenly alive to those advantages which their own foresightedness has created. As a class they certainly occupy the front rank in the country, for talent, respectability and usefulness; yet, within the recollection of many of you, there was a time when it was deemed degrading to labor with the hands—when the poor man, though possessed of a mind, and of literary acquirements, which a Burke or Brougham might be proud of, was not permitted to enter the arena and battle for fame upon an equal footing with his more opulent competitor. The time was when the farmer and the mechanic in poor or middling circumstances deemed a place behind a merchant's counter, in a lawyer's or doctor's office, the only ones fitted to develop the mind and improve the talent of his more promising sons.

But things have changed for the better, and are changing still. Capacity in the poor man is now as much regarded as in the rich. The sphere of his usefulness is no longer confined to the store and office; it is extended to a wider one—to one better calculated to draw out the power of body and mind. That sphere is the farm and mechanic shop.

From the circumstances which surround our countrymen, a great majority of them will continue to derive their living and their profits from agricultural pursuits.

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Our soil, climate and productions, the vast extent of our territory, our facilities to every market, and the growing interest which is being felt in agriculture, would seem to bear me out in this view of the case. While European nations are embroiled in war about the accession to thrones, or the adjustment of "the balance of power," American farmers must feed their armies and their subjects at home. View it in what light you may, you cannot fail to see the immense and growing interests of our husbandmen.

No one, unless gifted with the spirit of prophecy, can with the slightest hope of certainty, estimate the extent of that interest in our country one century hence, if it should continue to grow as it now seems to promise. The editor of a highly respectable paper in New York City, however, ventures an estimate which may fall far short of the truth, so far as population is concerned. He says:

"In a hundred years we shall have two hundred and thirty-two millions; and in a hundred and fifty years, or in the year 2,000, we shall have over seven hundred millions. * * * Our soil produced last year, over a hundred and fifty millions of bushels of breadstuffs, to say nothing about the rice and fruit crops. And yet we have a hundred and ninety millions of acres—more than five times the whole territory of England and Wales—which the spade and plow never touched."

Two centuries ago, New York city did not contain more inhabitants than the village of Niles at this time; now there are but three cities in the world containing a greater population, and they date their foundation beyond the days of our Savior.

Our own beautiful Peninsula furnishes us with abundant proofs to show the rapid strides which population and the industrial pursuits are making, all over our land.

Twenty years ago, the territory of Michigan contained a population of about 85,000. To-day, the State of Michigan numbers over 400,000. Within the last ten years she has doubled her population, and trebled the value and amount of her productions. The State census of 1840, shows that Michigan raised, the preceding year, 2,157,108 bushels of wheat, and nearly the same amount of corn. The census of 1850 shows the number of bushels of wheat raised in 1849, to be 4,893,141, and corn, 5,704,172 bushels—and it will be remembered by

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the most of you, that the wheat crop of 1849 was at least one-third short of an average crop. Mr. Taylor, our late Secretary of State, in comparing the census of 1840 with that of 1850 says: "The number of horses has increased *ninety* per cent., neat cattle *fifty* per cent., and sheep *seven hundred and sixty per cent.*" The wheat crop shows an increase of one hundred and twenty-seven per cent., corn 150 per cent., and rye 200 per cent. The wool clip has increased almost beyond precedent—while the census of 1840 shows but 153,375 lbs., the census of 1850 shows 2,007,598 lbs., or thirteen times greater in 1850 than in 1840.

In 1834, the population of Cass County, was but a trifle over 3,000, in 1840 it had reached 5,700, and to-day our population cannot fall short of 13,000. The census of 1840 puts our county down at 75,000 bushels of wheat, 178,000 bushels of corn, and 10,000 lbs. of wool. The census of 1850 shows the wheat crop to have been, in round numbers, 160,000 bushels, corn 423,000 bushels, and wool 48,000 pounds.

I believe I speak truly, when I say that we have in Cass county, increased our productions at least one-half, since the taking of the census of 1850, and our population near one-fourth.

The history of the settlement of Michigan, her progress in agriculture and the mechanic arts, her rapid increase in population, would be the history of every north-western State. Indeed, almost every State in the great Valley of the Mississippi, can present a history in most respects, as remarkable as our own. With such evidence before us, it is not strange we should calculate largely for the future of our country. With such evidence, finding no parallel in the history of the Old World, it is not strange that Europeans should throng upon our shores by thousands monthly, to seek a home among us, and participate in the blessings we so abundantly enjoy. Let them come; our land is long enough and broad enough for them all. Let them come, and join with us in leveling forests and cultivating fields, in building up cities and villages, in digging canals and constructing railways. Let them come; with their bronzed faces and toil hardened hands, they are welcome among us.

We have nothing to fear from them, for they have ever proved faithful to our flag, when opportunity offered. They leave a country where partial laws are partially administered; where the products of their la-

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bor go to enrich a corrupt and titled class, who hold no sympathies with them. They come among us and ask to share our labor and the benefits of our institutions. In fine, they ask to be regarded as men, and I am proud to say, that no jealous or narrow-minded laws, in regard to them, now find a place upon any statute book in the Union.

I could not properly conclude my remarks without adverting once more to the occasion, which calls so goodly a number of my fellow-citizens together.

Every country has, by the common consent of its people, set apart certain days of the year for relaxation from labor, for the purpose of enjoying in the pastimes and festivities which their respective holidays seem to demand. This is right and proper. Relaxation from labor, and indulgence in the occasional pastimes of the year, are as necessary to the mental and physical developments of man, as labor itself.

Thanksgiving, Christmas and New Years, belong to the calendar of our festival days, and have been observed nearly ever since the first settlement of the country.

The ever memorable "Fourth of July" has been added to the list, and now within the three years past, other days for recreation, for rational and useful enjoyment, have been added by the workingmen of Cass county. I mean the days set apart in each year for holding our County Agricultural Fairs. We set apart the days most convenient for the occasion; other counties do the same, so do the different States. The creation of these holidays (for such they really are) are indicative of the progress of agriculture and the mechanic arts, and should be encouraged by the entire community. While they afford rest and pleasant recreation, they bring together, once in each year, the farmers and mechanics of our county. The friendly interchange of feeling and sentiment which the occasion draws out—the plain told experience of the year past—the exhibition of the products of our workingmen—the friendly feeling which such days beget by thus drawing together men and women from the remotest parts of our county, all contribute to make our Fair days highly interesting and instructive. Such exhibitions fitly represent the intelligence, the wealth, and the industry of a people. They stimulate the husbandman to increase the amount and quality of his grains and fruit, as well as the blood and condition of his

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stock. They encourage the mechanic to redouble his exertions in behalf of his art, to improve and perfect his implements and machinery. They infuse into the mind of the good housewife new and important ideas in relation to the management of her household and the education of her children; and while putting these useful hints in practice, she little heeds the alarm cry of those of her own sex, who talk long and loud of "woman's rights;" who are more gifted with loquacity than a due sense of propriety; who possess as much of the masculine in their composition as the feminine; who have more time for idle gossip than for useful, womanly employment. The good housewife feels content with being mistress of her household, and of the affections of her husband, her sons and daughters. She feels it to be of more importance to shape the mind, the destiny of her young children, and administer to the comforts of those around her, than engage in the wild and visionary scheme of controling directly the affairs of this Republic.

The agricultural and mechanical skill of this country, has of late inspired other countries with something like a due appreciation of their claims, and the importance of fostering them, by every possible means. Fairs have been held in London and Dublin, which were open to the whole world. A "World's Fair" is now being held in New York city, which owes its existence to individual enterprise alone. The one held in London was aided and pushed forward by government patronage mainly. At these Fairs, individuals present articles for inspection and for prizes. The article exhibited, as well as the exhibition, fitly represent the country they hail from, and are set down to her credit or her loss. Though individuals receive the prizes awarded, nations compete for them. Great good, we believe, must result from these Monster Fairs in more respects than one. They beget a proper national pride in matters vital to the interests of a nation. When you can arouse that pride, she is prepared for unusual exertion in behalf of any movement which will gratify it. The good which flows from these exhibitions, is of the same nature of that which grows out of our State and County Societies, except that the influence of the former is less circumscribed than the latter.

Simultaneous movements have been made in different parts of the United States, toward the establishment of Agricultural Schools, as a means well calculated to advance this important science; but to Michi-

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gan belongs the honor of having taken the first active steps in the premises. Her University has closed, within the past year, one course of lectures upon agriculture, which was well attended. Now that our own State has set the ball in motion, let her citizens, her farmers and mechanics, and indeed all who feel an interest in the proper education of our youth, press upon our Legislature the necessity of engrafting upon the Normal School system, as well as upon our State University, departments dedicated exclusively to agriculture and the kindred arts.

In addition to the qualifications which our laws require of male teachers in our district schools, let them be required also to show themselves competent to teach the theory of correct farming. Indeed, the opinion is fast gaining ground, that a distinct institution should be organized under the auspices of the State government, where practical and scientific agriculture, chemistry, botany, mathematics, and the kindred sciences, should be taught; where the practical management of the farm, dairy, and stock, is learned. With such a powerful auxiliary as this, the husbandmen of Michigan would rank, in point of intelligence and usefulness, first in the land.

Taking into account the great improvements which have been made in our country, within the last quarter of a century, in the various departments of labor, the greatly increasing interest which is exhibited in its behalf, and the powerful inducements which are being held out to sustain and foster it, one cannot form any adequate idea of the progress which it will have made at the end of the next twenty-five years.

To you, working men of Cass county, belongs the duty of throwing your talents and experience into the scale of progress, to swell that great aggregate of useful and practical knowledge, which the present generation is required to work out for itself, and for the generation which is to come after it. As the means to acquit yourselves honorably of the task, educate yourselves, your sons and daughters, in all that appertains to the calling which you or they may have selected to pursue through life; fit them to govern States, to control flocks and herds, to sow and to reap—teach them that it is as honorable to control the one, as to govern the other; and above all, teach them to do well what their hands find to do. Encourage agricultural societies, and the circulation of agricultural books and papers among your friends and neighbors; and here I would suggest the propriety of encouraging,

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first, agricultural publications of our own State, because the information contained in them is better adapted to farming in Michigan, than would be any foreign production.

Enter into a generous and manly rivalry with your neighbor, in the management of your farm, your stock, and your dairy; let each strive to excel his neighbor in all the minutiæ of farming. If such a spirit and feeling is kept alive, you have nothing to fear for your calling, but much to be proud of.

A few words to the young men and women of our county, and I have done.

To the former, I would say, soon you will occupy the places of those who have grown gray in the service of agriculture and the arts. In their day and generation they labored to support you, to educate you, to beautify and improve the patrimony you will in due time be called upon to enjoy; their time and talents have boen put in requisition as much for your future, as for themselves in days gone by; prove yourselves worthy of the inheritance, which, though it may consist only of a sound, practical education, is more valuable far, than the richest mine of Australia. Recollect that our best and most valued men, through the whole history of our Republic, were taken from the farm, and the mechanic shop; that they started in life penniless, with no broad acres or well filled purses to back them in their first struggles for wealth and fame—but with an indomitable will, which no adverse circumstances could control, with soundly educated minds, guided by virtuous and industrious habits, they climbed the ladder of fame step by step, until they reached the topmost round. Follow their example, and success will follow you. A good name, patient industry, and a determination to excel in your calling, will bring you wealth and fame, crown your gray hairs with honors, and strengthen your declining years with a consciousness that you have done your duty to yourself, and to those who are to follow in your footsteps.

It may be considered entirely gratuitous in me, at this time, and upon this occasion, to venture even a sentence of commendation or advice to our young ladies; yet I conceive it to be as much within the province of an agricultural address, as any matter which could be embodied in one.

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In this country, the sphere of woman's usefulness is much too important, her influence much too great, to pass them by in silence. No where in the world are woman's rights so fully understood, or so carefully and faithfully guarded as in our own country. Under circumstances favorable to the development of her intellect, and those numberless good qualities which find a lodgment in her heart, she has proven herself, in every vicissitude of life, worthy of the high esteem in which she is held by her chivalrous countrymen. Their self-denial and suffering in the early settlement of America, their patriotic devotion to liberty in the days of the revolution, the self-sacrificing spirit exhibited by them in a pioneer life in the great west, their intellectual superiority when compared with the women of other countries make them fit companions and advisers for the hardy and energetic Republicans of the New World. It is not *only* while dispensing charities to the needy, administering consolation to the sick and afflicted, or pursuing the quiet labors incident to household life, that her worth is learned, or her usefulness felt. She shines brightest and purest when, with her little ones clustered around her, she drops into their tender minds those wholesome and invaluable truths, which are to protect them in childhood, and guide them to happiness and honor in after years. It is when she imprints upon their susceptible hearts, those correct ideas of right and wrong, of good and bad, which a mother's solicitude for her offspring, should never fail to suggest. It is when she urges upon them in later years–as they are about to launch out into the busy scenes of life—those salutary maxims which the inspiration of a mother's love alone can impart, and which if observed, conducts to happiness and prosperity. It is upon such occasions that the mothers of America appear most advantageously, and it is for this they deserve the Nation's thanks.

The tiller of the soil, the mechanic, the professional man, and the statesman of our country, owe their prosperity and success in life to the gentle counsels of the faithful wife, or the kind admonitions of the anxious mother. In view then, of the important position which the women of America have occupied, and in view of the responsibilities which must continue to rest upon them, it would be well for our *young ladies* to look over the field of their future labors, and prepare to acquit themselves well of the duties which may fall to their lot. Educate the body by healthy and useful exercise; rise at the early break of day; fly from

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the parlor and sitting-room, where luxury and ease are robbing you of the roses upon your checks, and is planting the seeds of disease in your system—fly to the garden or the fields; go among the flocks and herds, to the kitchen or dairy. Educate mind and body to fill any station which a wife or a mother may be called to fill. Learn to preside as well and as wisely in the log cabin, as in the costly mansion. When you have accomplished these things, you have done much for yourselves, and much to sustain the character and dignity of the women of America.

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REPORT

OF THE

CLINTON AGRICULTURAL AND HORTICULTURAL SOCIETY.

At an adjourned meeting of the Clinton County Agricultural and Horticultural Society, held at the Clinton House, in De Witt, on Saturday, the 28th day of January, 1854, for the election of officers, and to transact such other business as might properly come before it, Harvey Hunter, President, in the chair,

Wm. W. Webb, Treasurer of the Society, presented his report, which was read and accepted.

On motion,

The meeting proceeded to the election of officers for the ensuing year, as follows, to wit:

President—Henry Post.

Vice Presidents—I. T. Hollister, Orange Ferguson, C. A. Lamb, Harvey Hunter, David Clark, A. R. Marvin, and David Scott, of De Witt.

For Recording Secretary—F. R. Read.

Corresponding Secretary—J. H. Adams.

Treasurer—Wm. W. Webb.

On motion,

Article 7 of the Constitution was amended, by striking out the word "five," and inserting "seventeen," and adding thereto the words "to consist of one member from each township;" when, on motion,

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The following persons were chosen to act with the President and Recording Secretary, as a Board of Directors:

Bath—James Smith.
Victor—Wm. Brunson.
Ovid—John Voorheis.
Duplain—Nathan R. Lowe.
De Witt—Lewis Coburn.
Olive—Harvey Alexander.
Bingham—Gardner Conn.
Greenbush—Stephen Pearl.
Watertown—Jason Nichols.
Riley—Lyman Hungerford.
Bengal—Cortland Hill.
Essex—Humphrey Hammond.
Eagle—Burtis H. Beers.
Westphalia—Wm. T. Plowman.
Dallas—Geo. F. Dutton.
Lebanon—John Vance.
North Shade—Henry Lane.

The meeting then adjourned *sine die*.

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FOURTH ANNUAL REPORT

OF THE

GENESEE COUNTY AGRICULTURAL SOCIETY, 1853.

In performing the duty prescribed by the 13th Article of the By-Laws of the Genesee County Agricultural Society, the Executive Committee have much pleasure in reporting the continued and steady improvement manifested in the several branches of industrial occupation throughout the county; bringing with it its own reward, in the development of material comfort, wealth and general prosperity.

A more scientific mode of farming than that formerly in vogue, is rapidly extending itself over the county, and greater attention is bestowed upon the judicious rotation of crops, the application of manures, and the benefits to be derived from a thorough drainage of wet lands.

The Committee also observe an annually increasing interest taken in the proceedings of this Society, by the agricultural portion of the community; and they have practical evidence that the general improvement spoken of, is largely owing to the influence exercised by the Society; more especially by the knowledge acquired, and the friendly emulation excited at the yearly gatherings of intelligent citizens who throng the County Fairs.

A considerable share of the impetus to this important progress, in the right direction, may also be attributed to the very general diffusion and study of agricultural publications; and the benefits to be derived from the free use of this indispensable assistance to successful farming, cannot be over-rated.

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Besides the additional attention paid to the raising of farm crops and stock, within the last year unusual pains have been taken in the introduction of choice kinds of fruit. Impelled, no doubt, by the proofs exhibited at the Annual Fairs, of the admirable adaptability of the soil and climate of this county, to the cultivation of fruit, an extraordinary quantity of young fruit and ornamental trees have been imported, for both spring and fall planting, from the best nurseries in the State of New York. A nursery belonging to Wm. Bliss, has been for some years in existence in the town of Flushing. Of its condition, none of the Committe are qualified by sufficient information, to speak; but some of the choicest specimens of fruit offered for exhibition at the Fairs of the Society have been brought in by Mr. Bliss. A permanent nursery has also been established within the year in the township of Genesee, by two enterprising citizens, Messrs. Wilcox. An establishment of this kind, conducted by reliable proprietors, the Committee consider to be a very great desideratum—as well for the facility it will afford to the citizens of this county to supply themselves at home with such trees as they want, as for the importance of having in our midst a nursery that, if well conducted, in course of time will probably become the resort of citizens of neighboring counties, who at present supply themselves from other States. Nurseries now of the widest extent and reputation, have all had beginnings such as this; and the Committee think that so far as the enterprise of Messrs. Wilcox shall merit support, it is the manifest interest of the citizens of Genesee county to sustain them.

The progress of mechanical and manufacturing business, within the past year, has not been behind that of Agriculture and Horticulture. New Mills, Factories, Foundries, Machine-Shops, Steam Engines, Mercantile stores and dwelling houses are springing into existence with a rapidity almost magical; and persons returned after an absence of a year or two, have exhibited perfect astonishment at the improvements effected. Let the condition of the county be viewed in what light it may, these are the most abundant reasons for congratulation to be found.

With these preliminary observations, the Committee pass on to the proceedings of the Society during the year.

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The third annual meeting was held at the Court House, in Flint, on the 12th day of January 1853. At that meeting the Treasurer presented his report, showing the moneys received during the year 1852, to be $285 32

Amount appropriated for premiums	$160 75	
Other expenditures of the Society	90 62	
		251 37
Leaving an available balance in the Treasury of		$33 95

Amendments to the constitution were unanimously adopted, providing for the election of Vice Presidents by *viva voce* vote; and extending the time for payment of members' annual subscriptions, from the 1st of September, to the day of holding the Fair.

The following officers were then elected for the year 1853:

President—BENJAMIN PEARSON.

Vice Presidents—Argentine—Isaac Wixom.
Atlas—O. Palmer.
Clayton—James Brown.
Davison—Daniel Dayton.
Fenton—William Tanner.
Flint—Grant Decker.
Flushing—G. W. Thayer.
Forest—H. D. Seeley.
Gaines—James Van Fleet.
Genesee—J. W. Begole.
Grand Blanc—C. S. Thompson.
Montrose—John McKenzie.
Mundy—John Richards.
Richfield—W. J. Phillips.
Thetford—D. F. Bennett.
Vienna—Grovenor Vinton.

Recording Secretary—F. H. Rankin.

Corresponding Secretary—E. H. Walker.

Treasurer—E. H. Hazleton.

Executive Committee—N. H. Chittenden, D. N. Montague, R. B. Perry, Jonathan Dayton, C. H. Rockwood.

Auditors—William Paterson, G. S. Hopkins.

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After a discussion upon the propriety of the Society purchasing a piece of ground for the purpose of holding the Annual Fairs, &c., the meeting determined upon authorizing a committee to negotiate for a suitable lot, when found; and Messrs. Levi Walker, Warner Lake and A. B. Pratt, were appointed such committee, to examine and report to the Executive Committee where a suitable piece of land can be procured.

The Executive Committee held their first meeting on the 10th of March. In considering the list of premiums for competition at the Annual Fair, the committee deemed that it would be for the interest of the Society to increase the number of premiums, and in the following, which was adopted after mature deliberation, will be found additions to the premiums offered the previous year, in the classes—Farms, Horses, Sheep, Swine, Poultry, Farming Implements, Miscellaneous, Fruit, Field Crops, Samples of Field Crops, and Plowing.

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LIST OF PREMIUMS,

To be awarded at the Annual Fair of the Genesee County Agricultural Society, to be held on the 5th and 6th days of October, 1853:

FARMS.

Best cultivated farm, not less than 40 acres, and not less than 25 cultivated acres, ... $5 00

2d best, do 4 00

3d " do 3 00

Viewing Committee on Farms.—John L. Gage, Henry Schram and Gurdon Watrous.

Competitors for the premiums on farms, are required to notify the Recording Secretary of their intention to offer their farms in competition, on or before the first day of June next.

The Viewing Committee are requested to visit the farms entered for competition, during the last week of June next.

CATTLE.

1. Best full-blooded short horned Durham bull, 1 year old or over, ... $5 00

2. Best full-blooded Devon bull, 1 year old or over, ... 5 00

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3.	Best bull, 2 years old or over,	$3 00
4.	2d " " "	2 00
5.	3d " " "	1 00
6.	Best yearling bull,	3 00
7.	2d "	2 00
8.	3d "	1 00
9.	Best bull calf, 4 months old or over,	2 00
10.	2d " " "	1 00
11.	3d " " "	50
12.	Best milch cow,	3 00
13.	2d "	2 00
14.	3d "	1 00
15.	Best yoke of working oxen,	3 00
16.	2d " "	2 00
17.	3d " "	1 00
18.	Best yoke of 3 year old steers,	3 00
19.	2d " "	2 00
20.	3d " "	1 00
21.	Best yoke of 2 year old steers,	2 00
22.	2d " "	1 00
23.	3d " "	50
24.	Best yoke yearling steers,	1 00
25.	2d " "	1 00
26.	Best 2 year old heifer,	2 00
27.	2d " "	1 00
28.	Best yearling heifer,	1 00
29.	2d " "	50
30.	Best heifer calf,	1 00
31.	2d "	50

HORSES.

1.	Best stallion, 4 years old or over,	3 00
2.	2d " 4 " "	2 00
3.	3d " 4 " "	1 00
4.	Best 3 year old stallion,	2 00
5.	2d " "	1 00
6.	Best brood mare, (with foal by her side,) 4 years old or over,	3 00
7.	2d " " " " "	2 00
8.	3d " " " " "	1 00

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9.	Best span of matched horses, 4 years old or over,	$3 00
10.	2d " " " "	2 00
11.	Best 3 year old gelding,	2 00
12.	2d " "	1 00
13.	Best 3 year old mare,	2 00
14.	2d " "	1 00
15.	Best 2 year old colt, gelding or stallion,	2 00
16.	2d " " " "	1 00
17.	Best 2 year old mare colt,	2 00
18.	2d " "	1 00
19.	Best yearling colt,	1 00
20.	2d "	50

Any span of horses entered for competition as matched horses, must resemble each other in size, form, color, and action.

SHEEP.

1.	Best fine wool buck, 1 year old or over,	$3 00
2.	2d " " " "	2 00
3.	3d " " " "	1 00
4.	Best pen of 5 ewes,	3 00
5.	2d "	2 00
6.	3d "	1 00
7.	Best pen of 5 buck lambs,	3 00
8.	2d " "	2 00
9.	3d " "	1 00
10.	Best pen of 5 ewe lambs,	3 00
11.	2d " "	2 00
12.	3d " "	1 00
13.	Best Leicestershire buck and two ewes,	2 00
14.	Best Southdown buck and two ewes,	2 00

SWINE.

1.	Best boar, 4 months old or over,	2 00
2.	2d " " "	1 00
3.	Best sow, and not less than 5 pigs,	3 00
4.	2d " " "	2 00
5.	3d " " "	1 00

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POULTRY.

1.	Best cock and hen,	$1 00
2.	2d " "	75
3.	3d " "	50
4.	Best lot of poultry, not less than five, owned by the exhibitor,	1 00
5.	2d " " "	75
6.	3d " " "	50

FARMING IMPLEMENTS, &C.

1.	Best breaking-up plow for general use	3 00
2.	2d " "	2 00
3.	Best plow for single team, for general purposes,	2 00
4.	2d " " "	1 00
5.	Best farm wagon,	2 00
6.	" harrow,	1 00
7.	" general cultivator,	1 00
8.	" fanning mill,	2 00
9.	" straw cutter,	1 00
10.	" corn and cob crusher,	2 00
11.	" horse cart for farm,	50
12.	" ox " "	1 00
13.	" horse rake,	1 00
14.	" ox yoke,	50
15.	" grain cradle,	1 00
16.	" six hand rakes,	50
17.	" six hay rakes,	50
18.	" six manure forks,	50
18.	" hay rigging for wagon,	50
20.	" threshing machine,	2 00
21.	" corn sheller, hand power,	50
22.	Best and most collective assortment of agricultural implements, manufactured in this county, under supervision of the exhibitor,	2 00
23.	Best horse power, for general purposes,	2 00

MISCELLANEOUS.

1.	Best buggy,	2 00
2.	Best carriage harness,	1 00
3.	Best wagon harness for farm,	1 00

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4. Best bureau,	$1 00
5. Best table,	50
6. Best variety cabinet-ware,	1 00
7. Best window blinds,	1 00
8. Best window sash, 24 lights,	50
9. Best panel door,	50
10. Best notch clevis,	50
11. Best churn,	50
12. Best pork barrel,	50
13. Best flour barrel,	50
14. Best wash tub,	50
15. Best half dozen pails,	50
16. Best variety of stone-ware,	50
17. Best box of saleratus, not less than 100 pounds,	50
18. Best two half-thousand bunches shingles,	1 00
19. Best thousand brick, ten to be exhibited,	50
20. Best 12 corn brooms,	50
21. Best bee hive,	50
22. Best 10 lbs. honey	50
23. Best 5 lbs. maple sugar, with process of manufacturing and clarifying,	50
24. Best gallon of maple molasses,	50
25. Best made coat,	50
26. Best pair fine boots,	50
27. Best pair coarse boots,	50
28. Best pair buckskin gloves,	50
29. Best " " mittens,	50

FLOUR.

1. Best barrel flour, from least wheat, with a full statement of same,	2 00
2. 2d " " " " "	1 00

HORSE SHOEING.

1. Span of horses best shod,	1 00

BUTTER AND CHEESE.

1. Best 10 lbs. of butter,	1 00
2. 2d 10 " "	75
3. 3d 10 " "	50

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4.	Best cheese, not less than 20 pounds,	$1 00
5.	2d " " 20 "	75
6.	3d " " 20 "	50

DOMESTIC MANUFACTURES.

1.	Best woolen shawl,	1 00
2.	Best pair woolen blankets,	1 00
3.	Best 10 yards flannel,	1 00
4.	Best 10 yards woolen cloth,	1 00
5.	Best 10 yards woolen carpet,	1 00
6.	Best 10 yards rag carpet,	1 00
7.	Best 10 yards tow cloth,	1 00
8.	Best hearth rug,	50

HOSIERY.

1.	Best pair woolen knit stockings,	50
2.	" cotton knit stockings,	50
3.	" linen knit stockings,	50
4.	" woolen socks,	25
5.	" cotton socks,	25
6.	" woolen knit mittens,	25
7.	" woolen knit gloves,	25

ORNAMENTAL NEEDLE WORK.

1.	Best and greatest variety of worsted work,	1 00
2.	Best ornamental needle-work,	50
3.	" ottoman cover,	50
4.	" table cover,	50
5.	" worsted worked portfolio,	50
6.	" fancy chair work, with needle,	50
7.	" worked collar,	50
8.	" " quilt,	1 00
9.	" white quilt,	50
10.	" lace cape,	50
11.	" two lamp mats,	50
12.	" silk bonnet,	50
13.	" straw bonnet,	50
14.	" " hat,	25

Discretionary premiums will be awarded on articles of merit not included in the above list.

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FANCY WORK.

1.	Best specimen ornamental shell work,	$0 50
2.	Best and largest collection of artificial flowers,	1 00
3.	" specimen of wax flowers,	50
4.	" " animal painting, in oil,	50
5.	" " " in water colors,	50
6.	" " cattle drawing,	50
7.	" daguerreotype,	1 00

Discretionary premiums will be awarded on manufactured articles of merit, not included in the above list.

FLOWERS.

1.	Greatest variety and quantity of flowers,	50
2.	Best and greatest variety of dahlias,	50
3.	" ten dissimilar blossoms "	50
4.	" and greatest variety of roses,	50
5.	" ten dissimilar blooms "	50
6.	" and greatest variety indigenous plants,	50
7.	" collection of green house plants owned by one person,	50
8.	" floral design,	50
9.	" hand bouquet,	50
10.	" basket bouquet with handle,	50

FRUIT.

1.	Best assortment of table apples, not less than five varieties,	1 00
2.	2d best " of table apples, not less than five varieties,	75
3.	3d best " of table apples not less than five specimens,	50
4.	Best single variety of table apples, not less than six specimens,	50
5.	Best assortment of winter apples, not less than six varieties,	2 00
6.	2d best assortment of winter apples, not less than six varieties,	1 75
7.	3d best asortment of winter apples, not less than six varieties,	1 50
8.	4th best assortment of winter apples, not less than six varieties,	1 25
9.	5th best assortment of winter apples, not less than six varieties,	1 00

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10. 6th best assortment of winter apples, not less than six varieties, ... $0 75
11. Best and greatest variety of pears named a labelled, ... 1 00
12. 2d best " " " 75
13. 3d best " " " 50
14. Best and greatest variety of peaches, named and labelled, 75
15. 2d best " " " 50
16. 3d best " " " 25
17. Best four varieties of plums, six specimens each, ... 50
18. " collection of plums, six specimens each, ... 50
19. " twelve plums, choice variety, ... 50
20. " and greatest number of good varieties of nectarines and apricots, six specimens each, ... 50
21. " six specimens of any good variety, ... 50
22. " lot of quinces, not less than ten specimens, ... 1 00
23. 2d best " " " 75
24. 3d best " " " 50
25. Best and most extensive collection of grapes, ... 1 00
26. 2d best " " " 50
27. Best six specimens of any variety of water melons, ... 50

Discretionary premiums will be awarded for choice fruits not enumerated in the above list.

VEGETABLES.

1. Best 6 stalks celery, ... 25
2. " 3 heads cauliflower, ... 25
3. " " brocoli, ... 25
4. " 12 white table turnips, ... 25
5. " 12 carrots, ... 25
6. " 12 beets, ... 25
7. " 12 parsnips, ... 25
8. " 12 onions, ... 25
9. " 3 heads of cabbage, ... 25
10. " 12 tomatoes, ... 25
11. " peck beans, any variety, ... 25
12. " bunch double parsley, ... 25
13. " 3 squashes, ... 25
14. " and largest pumpkin, ... 25

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15.	Best 12 ears of corn,	$0 25
16.	" peck table potatoes,	25
17.	" and greatest variety of vegetables raised by exhibitor,	50

FIELD CROPS.

1.	Best crop of winter wheat, not less than one acre,	3 00
2.	2d best crop of winter wheat, not less than one acre,	2 00
3.	3d best " " " "	1 00
4.	Best crop of Indian corn, not less than one acre,	3 00
5.	2d " " " "	2 00
6.	3d " " " "	1 00
7.	Best crop of oats, not less than one acre,	2 00
8.	" potatoes, not less than half an acre,	2 00
9.	" rutabagas, " "	2 00
10.	" broom corn, " "	1 00
11.	" carrots, not less than one-fourth of an acre,	2 00
12.	Best acre of clover seed,	1 00
13.	Best acre peas,	2 00
14.	Best acre of flax,	2 00
15.	Best acre of barley,	2 00

Applications for premiums on field crops may be entered on the days of the Fair. Competitors will be required to ,furnish, for the information of the Viewing Committee, full statements as to the manner of cultivation, together with satisfactory evidence of the amount of produce; said statements to be handed to the Recording Secretary, on or before the first day of December. The premiums will be awarded on the first Wednesday in December. All field crops must be weighed or measured.

SAMPLES OF FIELD CROPS.

1.	Best sample of winter wheat, not less than 1 bushel,	50
2.	" spring " "	50
3.	" corn, " "	25
4.	" oats, " "	25
5.	" peas, " "	25
6.	" flax seed, " "	25
7.	" barley, " "	25

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Discretionary premiums will be awarded on meritorious products of the soil, not enumerated in the foregoing list.

PLOWING MATCHES.

1.	Best plowing match with horses,	$3 00
2.	2d " " "	2 00
3.	3d " " "	1 00
4.	Best plowing match with oxen,	3 00
5.	2d " " "	2 00
6.	3d " " "	1 00

The usual steps were taken to give publicity to the foregoing list.

Messrs. Walker and Lake attended on the part of the Committee appointed at the Annual Meeting, and reported that they had viewed an eligible piece of land which could be purchased upon reasonable terms.

The President was thereupon appointed an additional member of the existing Committee, and further power conferred upon it, authorizing the purchase of the land in question, or some other, for the purposes of the Society.

The next meeting of the Executive Committee was held on the 19th of August, when Grant Decker, Esq., was appointed Marshal of the Fourth Annual Fair. The usual Viewing Committees were also then appointed, and a code of rules and regulations for the government of the Fair, was adopted.

The Fair was held on Wednesday and Thursday, the 5th and 6th days of October. During the first day the weather was cold and ungenial, but the second was much finer.

A much larger number of visitors attended than at any of the previous Fairs, and the grounds were quite thronged with an admiring crowd. In 1852, 309 members' tickets were issued. This year the number issued was 317.

Considerable expense was incurred in erecting additional offices, pens, sheds, &c., so that the officers of the Society were enabled to improve the arrangements, and observe a better order in the distribution of the stock and other articles on exhibition, than could be accomplished under the deficient accommodation provided in previous years.

Owing to the inclemency of the weather on the first day, exhibitors generally, did not bring forward their articles for entry until the fore-

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noon of the second day; when they continued to crowd in until the Committee were obliged to decline making any more entries, in order that the Committee books might be placed in the hands of the Viewing Committees. In their desire to accommodate such exhibitors, the Committees delayed closing the books until the latest practicable moment; and by so doing they necessarily curtailed the time allotted to the Viewing Committees to make their awards. This was an evil unavoidable under the circumstances, without incurring a greater; but it is hoped that a more strict punctuality on the part of exhibitors in future, and greater promptitude in having their entries made in due season, may prevent its recurrence.

The show of cattle, manifested a considerable improvement, and a large increase in comparison with last year; and some very fine animals were upon the ground, besides those to which premiums were awarded.

The display of horses was also good, but not equal to what might have been expected, considering the number owned in the county.

There is no department of stock raising, upon which more attention and pains have been bestowed, than the improvement of sheep. The increase which has taken place of late years in the price of wool, has rendered this a valuable item in the farmer's business, and has led to extensive importations of the most celebrated varieties of fine-wooled sheep. The owners of these foreign animals, however, did not bring them forward for competition, while the expectation that they would have done so, served to deter some proprietors of superior mixed and native breeds from entering; so that the competition in sheep was not lively, and although the pens contained some quite superior animals, the exhibition was not so good as the county is capable of producing.

The show of hogs was fine, and far in advance of last year.

Butter was, as usual, very good, and very plenty. In this branch of dairy farming, it would be difficult to surpass the county of Genesee. In cheese, however, the committee found the same want of competition which was previously observed, and noted in the last Annual Report of this Society. It may in part be accounted for this year, by the extreme drouth of the summer and fall, using up the feed, and rendering milk scarce.

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The exhibition of poultry was fair, and would have been much better, but for a mortality which prevailed, by which some who devote attention to this branch of domestic economy, lost their finest birds during the past year.

With the exception of plows, the show of farming implements and miscellaneous articles, was meagre and inferior. The apathy, which the mechanics of the county have heretofore exhibited to the objects of the Society, and which the committee noted last year, still exists, and is much to be regretted. Agricultural and mechanical industry are so closely allied, that one cannot flourish where the other languishes, and the committee are happy to know that the various improvements in progress, already referred to in the commencement of this report, have created an almost unexampled demand upon the activity of the mechanics of the county. This engrossment of their time may partially account for the absence of the products of their skill at the Annual Fair, from want of leisure to prepare articles for exhibition. However that may be, it is hoped hereafter they will unite more extensively with their agricultural brethren, in manifesting to the public the true state of advancement of the county in industrial resources.

There was a full display of domestic manufactures. Carpeting, cloth, and hosiery, were of the highest excellence; many specimens speaking most commendably of female skill and industry.

In the more ornamental departments of the exhibition—as needlework, fancywork, flowers &c., the superiority of female taste shone conspicuously. Every side of the hall was ornamented with a profusion of the most exquisite specimens of woman's finger-work. The beautiful arrangement of the floral hall, by the ladies of the committee, resembled an attempt to realize the oriental poet's description of the fabled Persian Gardens; and the Society and its visitors are under deep obligation to all the ladies who thus devoted their time and taste to increasing the attractiveness of the exhibition. So long as the mothers, wives, sisters and daughters of the citizens of Genesee, take such measures as these, to evince their desire to encourage her agricultural exhibitions, their course cannot have any tendency but onward.

In general, the specimens of fruit brought forward were not equal to former years. This must be attributed to the unfavorable season; for without doubt, there is annually an increased amount of attention given

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to its culture. The result of the recent importations of young fruit trees, already referred to, cannot be expected to be witnessed for some time to come. Less apples, and more pears and grapes than usual were offered. The quinces could not be surpassed.

In the important item of vegetables, the display was highly creditable to the producers. In the cultivation of almost all kinds, a degree approaching perfection has been attained. Potatoes, especially, appeared in great variety, and of the most superior quality.

The samples of field crops were not numerous; but such as were exhibited, were much admired for their excellence.

Considerably more teams were entered for the plowing match, than ever before. The competition was very spirited; and all the plowing was good—so good, that the judges had hesitation and difficulty in deciding to whom they would award the premiums.

The following are the awards of the several Viewing Committees:

CATTLE.

Judges—C. N. Beecher, C. D. W. Gibson, John Hill.

Two year old bulls—first premium to Nathan Cobb; second to C. Cronk; third to A. Crapser.

Yearling bulls—first premium to John B. Jameson; second to Henry Schram.

Bull calves—first premium to Nathan Cobb; second to Silas Smith; third to Childs Atherton.

Milch cows—first premium to Thomas Daly; third to C. H. Rockwood.

Working oxen—first premium to Asahel Robinson; second to A. Crapser; third to Norman Cone.

Three year old steers—first premium to Ira Lum; second to J. J. Beasley; third to A. Crapser.

Two year old steers—first premium to N. H. Chittenden; second to R. A. Carman.

Yearling steers—first premium to A. B. Pratt; second to N. H. Chittenden.

Two year old heifers—first premium to Jonathan Dayton; second to Wm. Bendle.

Yearling heifers—first premium to C. S. Thompson; second to Wm. Eckley.

Heifer calves—first premium to C. H. Rockwood.

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DISCRETIONARY PREMIUMS.

Judges recommend a discretionary premium to Jonathan Dayton for a calf 2 months and 9 days old, half-blood Devonshire, which "the committee report to be very meritorious, and recommend a premium."

HORSES.

Judges—L. Y. Bickford, A. Howe, Benj. Boomer.

Four year old stallions—first premium to C. N. Beecher.

Three year old stallions—first premium to Benj. Boomer, Jr.

Brood mares, with foals—first premium to Asa Torrey; second to Wm. McClinchy.

Matched horses—first premium to A. Crapser; second to Samuel Aplin.

Three year old geldings—first premium to G. Zufelt; second to R. W. Graham.

Three year old mares—first premium to Henry Hascall; second to D. Cudderback.

Two year old horse colts—first premium to John Brittan; second to Hiram Bristol.

Two year old mare colts—first premium to Hiram Hall; second to Perry Watkins.

Yearling colts—first premium to Asa Wolverton; second to Asa Torrey.

DISCRETIONARY PREMIUMS.

Judges recommend a premium to Benjamium Pearson, for best four year old horse.

To J. B. Hamilton, for second best four year old horse.

To Wm. Barnhart, for a brood mare.

SHEEP.

Judges—S. M. Green, E. Perry, Jr., Daniel Dayton.

Fine wool bucks—first premium to Charles Bates; second to Silas Smith.

Pens of five ewes—first premium to Chas. Bates; second to R. B. Perry; third to Henry Schram.

DISCRETIONARY PREMIUM.

To R. B. Perry, for five ewe lambs; no competition.

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RECOMMENDATORY NOTICES.

R. B. Perry, five buck lambs: "three of these are fair, and two of them superior. No competition."

Richard Johnson, a buck; "coarse-wooled, good grade, not on premium list."

SWINE.

Judges—H. L. Wilcox, I. C. Atherton, P. A. Skinner.

Boars—first premium to A. Crapser; second to Cyrus Peabody.

Sow and five pigs—first premium to R. B. Perry; second to W. R. Scoville.

POULTRY.

Judges.—R. P. Aitken, Jonathan Cudney.

Cock and hen—second premium to George Buckingham; third to Benjamin Pearson.

Lot of poultry not less than five—first premium to Geo rge Aplin; second to George Buckingham.

FARMING IMPLEMENTS, (EXCEPT PLOWS.)

Judges.—Wm. Tanner, Charles Bates.

Farm wagons—premium to Gahan & Decker.

Harrows—premium to R. A. Carman.

Straw Cutters—premium to W. Knickerbocker.

Hay rigging for wagon—premium to R. A. Carman.

MISCELLANEOUS ARTICLES.

Judges—John W. King, G. S. Hopkins, A. T. Crossman.

Wagon harness for farm—premium to Ward Gazlay.

Buckskin mittens—premium to David Mather.

Buckskin gloves—premium to David Mather.

DISCRETIONARY PREMIUMS.

Judges recommend discretionary premiums to Joseph Woolhouse, for a panel door, exhibited as a specimen of graining. "The Committee recommend this piece of work as a highly meritorious specimen of Oak graining, and worthy of a premium. *It can't be beat.*"

J. B. Clark & Manly Miles, for case of preserved birds, No. 34.

J. B. Clark & Manly Miles, for case of preserved birds, No. 35.

J. B. Clark & Manly Miles, for case of preserved insects, No. 36.

John W. Whiting, for a one horse cart.

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David Mather, for buckskin gauntlets.

J. W. Palmer, for a cheese press.

J. R. Walker, for a set of teeth; specimen of dentistry.

W. True, for a cage of live birds.

M. S. Budlong, for a set of marbles. "A meritorious piece of workmanship, worthy of premium."

RECOMMENDATORY NOTICES.

J. B. Clark & Manly Miles, case of preserved insects, No. 37. "Recommended to notice."

Ward Gazlay, two trunks. "Worthy of notice."

H. L. Wilcox, a box of honey. "Worthy of notice."

Flint Scientific Institute, a blue heron (preserved by Drs. Clark & Miles.) "A fine specimen, worthy of notice."

Joseph Woolhouse three panels—specimens of graining. "Worthy of notice."

FLOUR.

Judges—Wm. R. Scoville, Wm. S. Pearson.

Barrel of flour—first premium to P. Smith.

"We consider this the first quality of flour, and recommend the first premium."

BUTTER AND CHEESE.

Judges—A. B. Pratt, Gurdon Watrous.

Cheese—first premium to R. B. Perry; second to R. B. Perry.

"The committee on butter and cheese would remark in relation to the specimens of butter, that they were so uniformly good, that a very practical taste would be necessary to discriminate."

DOMESTIC MANUFACTURES.

Judges—C. S. Thompson, Mrs. H. I. Higgins, Mrs. A. Thayer.

Woolen shawl—premium to H. L. Wilcox. "Very good."

Ten yards woolen cloth—premium to H. W. Felt.

Ten yards woolen carpet—premium to J. B. Jameson. "The best and only piece offered, and considered very good."

Ten yards rag carpet—premium to J. B. Jameson.

DISCRETIONARY PREMIUMS.

"There are three other rag carpets which the committee think worthy of a small premium, if the funds of the Society will permit," viz: to Ira Chase, H. C. Phelps, Mrs. G. Zufelt.

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I. C. Atherton—a bunch woolen yarn. "Committee think there was a mistake in entering this, but recommend a premium, the article being very good."

HOSIERY.

Judges—Mrs. C. N. Beecher, Mrs. Henry Schram, Mrs. O. Parker.

Woolen knit stockings—premium to Mrs. J. L. Gage.

Cotton knit stockings—premium to Mrs. J. L. Gage.

Woolen socks—premium to Miss Jane Gage.

Cotton socks—premium to Miss Jane Gage.

Woolen knit mittens—premium to Miss Mary Gage.

Woolen knit gloves—premium to Asahel Curtis.

DISCRETIONARY PREMIUM.

Judges recommend 25 knots knitting yarn, exhibited by Mrs. John L. Gage.

ORNAMENTAL NEEDLEWORK.

Judges—Wm. M. Fenton, Mrs. L. G. Buckinghman, Mrs. C. H. Summers.

Best ornamental needlework—premium to Mrs. C. S. Payne, a worked picture, finely embroidered.

Ottoman cover—premium to Mrs. C. H. Summers.

Worsted worked portfolio—premium to Mrs. E. Rosevelt.

Worked collar—premium to Mary A. Bebee.

Worked quilt—premium to Mrs. T. V. Rogers. "Finely wrought all over."

White quilt—premium to Mrs. L. Payson. "Superior."

Two lamp mats—premium to Miss Holgate.

DISCRETIONARY PREMIUMS.

The Judges recommend discretionary premiums to Miss Holgate, for a chair tidy. "Excellent."

Martha Drake, for a pair silk mitts. "Well wrought"

Mrs. G. S. Hopkins, for an embroidered pocket handkerchief.

Mrs. S. M. Green, for a child's crochet apron.

Mrs. E. Rosevelt, for an embroidered music stool.

Mrs. T. V. Rogers for a black cloth wrought vest. "Excellent."

Mrs. J. Dayton, for a stand tidy. "Excellent."

Mrs. Talmon Frost, for a shirt. "Fine plaits; excellent,"

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RECOMMENDATORY NOTICES.

Martha Drake, a crochet flat; "good."
Miss Beach, a fancy cushion; "fair."
Mrs. E. Rosevelt, an embroidered cloak; "good."
Agnes Swan, an ottoman cover; "good."
Miss H. W. Foot, a set rocking chair tidies; "got up in good style."
Mrs. C. H. Summers, a worked quilt; "nice article."
" " three toilet covers, one muslin, two cloth "good."
Maria Willett, a stand tidy; "large, and good work."
Mrs. Handy, a worked cap; "excellent article."
Miss E. Atherton, a shirt, "fine plaits; excellent."
John Bird, a shirt; "plain, well made."

FANCY WORK.

Judges—Mrs Wm. M. Fenton, Mrs. W. Crocker, Mrs. G. S. Hopkins.
Ornamental shell-work—premium to Miss H. W. Foot.
Artificial flowers—premium to Miss Catharine Handy.
Wax flowers—premium to Miss Holgate.

DISCRETIONARY PREMIUMS.

Judges recommend discretionary premiums for artificial flowers, by a little girl. (Unknown to Secretary.)
To G. A. Van Sickle for a monochromatic drawing.
To Miss Louisa A. Avery, for a lot of pencil drawings.

FLOWERS.

Judges—John Willett, Mrs. R. W. Jenny, Mrs. D. Clarke.
Greatest variety and quantity of flowers—premium to Mrs. Russell Bishop.
Best and greatest variety of Dahlias—premium to Mrs. Giles Bishop.
Best collection of green-house plants—premium to Manly Miles.

FRUIT.

Judges—Daniel Clarke, C. P. Smith, Ira Chase.
Assortment of table apples—2d premium to Henry Schram; 12 varieties, "4 only, named."
Assortment winter apples—second premium to Norman Cone. "Named most correctly;" 3d to C. Cronk; 5th to Wm. H. Crocker.
Best and greatest variety of pears—1st premium to Mrs. C. S. Payne; 2d to Daniel Clarke.

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Lot of quinces—1st premium to H. I. Higgins; 2d to Mrs. C. S. Payne; 3d to Minor Pratt.

Collection of grapes—2d premium to Mrs. C. S. Payne.

DISCRETIONARY PREMIUMS.

Judges recommend discretionary premiums to S. W. Drake, for a lot of seedling peaches. "Good."

M. C. Cole, for two water-melons.

Charles Moon, for a water-melon.

Mrs. C. S. Payne, for a plate Catawba grapes.

Mr. Bliss, for "a lot of 19 varieties of apples and pears, named—not all correctly. Not entered in season, owing to an accident on the way."

Peaches not of a quality to merit a premium, except No. 57, deemed a good seedling.

Grapes limited in quantity and not esteemed of the best quality. The committee recommend to lots 142 and 144, as one lot of Isabella grapes correctly named, premium No. 26. To No. 143, Catawba, a discretionary premium.

VEGETABLES.

Judges, Lewis Buckingham, Thomas Patridge.

Six stalks celery—premium to Rev. H. H. Northrop.

Three heads cauliflower—premium to J. B. Walker.

Twelve table turnips—premium to Daniel McCarthy.

Twelve carrots—premium to R. W. Dullam.

Twelve beets—premium to R. W. Dullam.

Twelve onions—premium to A. Curtis.

Twelve tomatoes—premium to Rev. H. H. Northrop.

Peck beans—premium to G. A. Van Sickle.

Twelve ears corn—premium to Henry Schram.

Peck table potatoes—premium to Daniel McCarthy.

DISCRETIONARY PREMIUM.

Judges recommend a discretionary premium for 12 ruta bagas, exhibited by R. W. Dullam.

SAMPLES OF FIELD CROPS.

Judges—George Crocker, Alanson Munger, Grovenor Vinton.

Winter wheat—premium to Wm. Schram.

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DISCRETIONARY PREMIUMS.

A bushel Soles wheat—Joel Bardwell, "first rate."

A bushel seed corn in ears; Ohio dent, R. Tupper.

A basket yellow corn in ears, J. W. King.

RECOMMENDATORY NOTICE.

Seed wheat, exhibited by R. B. Perry, "very nice."

PLOWS AND PLOWING.

Judges—Lewis Buckingham, H. L. Wilcox, Alanson Munger.

Breaking up plows for general purposes—1st premium to A. Crapser; 2d to Benjamin Boomer.

Plows for single team, for general purposes—1st premium to Elisha Taylor; 2d to R. B. Perry.

Plowing with horses—1st premium to Benjamin Boomer, (plow held by Asa Uttley;) 2d to Elisha Taylor, (plow held by John Burch;) 3d to R. B. Perry.

Plowing with oxen—First premium to A. Crapser.

DISCRETIONARY PREMIUMS.

E. Rockafellow, for plowing with horses.

E. Rockafellow, for breaking up plow.

E. Rockafellow, for single plow.

The committe have satisfaction in reporting that all the plowing was executed in a handsome and workmanlike manner; and it required some consideration to decide upon the awards. Mr. Boomer's team, to which the first premium is awarded, did the work, as the committee think, in rather more a scientific manner than the others; but all was good.

There was no competition in plowing with oxen, but Mr. Crapser performed his work in so superior a style, that the committee have no hesitation in considering him entitled to the first premium.

The plows all worked well; and the committee consider that the jointer used upon the plow of Mr. Perry, is an improvement worthy of general adoption.

The Executive Committee held its last meeting on the 7th of December, when the Chairman of the Viewing Committee on Farms attended, and submitted the following report:

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FARMS.

First premium to Rowland B. Perry, of Grand Blanc; second to Gurdon Watrous, of Grand Blanc; third to Lewis G. Bickford, of Flint.

To the Executive Committee of the Genesee County Agricultural Society.

The Committee on Farms respectfully report, that they examined the farms offered in competition for premiums, on the first and eighth days of July last; also on the day previous to the Fair of the Society.

In order to give a slight view of their action, they have thought proper to give a statement of the crops growing on the farms exhibited:

On the farm of R. B. Perry—15 acres of wheat; 12 acres of corn; 7 acres of peas; 5½ acres of barley; 1 acre of potatoes; 1 acre of ruta bagas; 15 acres of grass for mowing; 20 acres of pasture—76½ acres cultivated.

Farm of L. G. Bickford—18 acres of wheat; 13 acres of corn; 7 acres of oats; 15 acres of grass for mowing; 12 acres of pasture—65 cultivated.

Farm of E. Sawyer—9 acres of wheat; 12 acres of corn; 6 acres of oats and peas; 6 acres of oats; 20 acres of grass for mowing; 25 acres of pasture—78 acres cultivated.

Farm of G. Watrous—10 acres of wheat; 10 acres of corn; 10 acres of grass for moving; 4½ acres of barley; 4 acres of oats; 12 acres of pasture—50½ acres cultivated.

In determining these awards, the Committee took into consideration the rotation of crops, manner of cultivation, and general appearance of crops, when growing, as well as the amount of produce raised when fully ripe. Previous to making the second examination, Col. Sawyer withdrew his farm from competition.

JOHN L. GAGE, *Chairman.*

The report was adopted, and the awards confirmed.

An extensive donation of valuable public documents, comprising Reports of the Patent Office—Mechanical and Agricultural—and other Congressional publications, have been placed at the disposal of this Society by the Hon. James L. Conger, late member of Congress from this district. It is the desire of that gentleman to have the volumes

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distributed as premiums; and they will form an important and attractive addition to the usual premium list.

The Annual Address was delivered by Nelson W. Butts, Esq., on the Fair ground. The best comment upon it is the vote of the Society, upon hearing it, to extend its usefulness by publication, which was accordingly done.

No further report has been presented by the Committee appointed to purchase a piece of land; but it is understood that negociations have been suspended for the present, owing to the want of funds in the treasury available for the purchase.

All of which is respectfully submitted. For the Executive Committee,

F. H. RANKIN, *Recording Secretary.*

ADDRESS

DELIVERED ON THE 6TH OF OCTOBER, 1853, AT THE FOURTH ANNUAL FAIR OF THE GENESEE COUNTY AGRICULTURAL SOCIETY.

BY NELSON W. BUTTS, ESQ.

FELLOW-CITIZENS:—The Annual Fair of the Genessee County Agricultural Society has excited an interest becoming the occasion, and is an evidence of the high claims which its object has upon the community at large.

The earth was by Divine appointment to furnish subsistence for man. We are informed from sacred history that when the earth and the heavens were created, there was not a man to till the ground. Man, was, therefore, created and placed in a garden called Eden, not to lie down in idleness, and vegetate luxuriously like the plants and herbs which adorned his paradise; but to dress and keep it. And, though from transgression of God's law, he was driven from this state of innocency and happiness, and condemned to a life of solicitude and toil; and though for his sake the earth was cursed, and was to produce thorns and thistles, and he to gain his bread from the sweat of his brow; yet it is evident that in the economy of his creation, as well as in the appointment of his lot, he was destined for active employment. An English poet has said, with some poetic license—

"The proper study of mankind is man."

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I think we may with more truth assert, that the proper business of mankind is Agriculture. In the list of useful arts, it stands pre-eminent. It is the nursing mother of all animate creation—sustaining, nourishing and supporting everything which has life. Agriculture is a pursuit, which, above all others, distinguishes a state of civilization; and the progress of its improvement furnishes a test as well of the prosperity, as of the intelligence of society. Upon it, as a basis, are erected all the frame-work and superstructure of the useful arts. Its influence, too, is expansive in the highest degree, and with every new impulse it reaches the utmost bounds of individual enterprise. It gives wings to commerce, and impetus to manufacturing industry, and sets in motion the various mechanic arts. It fixes the value of money; and the crops form the standard which regulates the exchanges between the different portions of the globe. The growth of the cities and villages, depends upon the wealth which the country pours in upon them; and the increase of population, upon those resources which the earth supplies. To the never failing returns which the harvest brings, in its annual round, kingdoms and republics alike look for national aggrandizement and permanent prosperity. It will thus be seen, that cultivating the soil is not only an honest and useful employment, but an honorable one. It may soil the clothes, harden the hands, and give a sun-burnt face, but these are only decorations which nature lavishes freely upon the husbandman, and rather adds to his beauty, than otherwise.

It has pleased the benevolent Author of our existence, to set in boundless profusion before us, the elements of a high state of cultivation and enjoyment. Blessings cluster about us like the fruits of the land of promise, and science unfolds its treasures, inviting us to partake of them, without money and without price. We are reminded, from the propensities of our nature, as well as the philosophy of our being, that we were formed for care and labor—for the enjoyment of property —for society and government—to work with the elements around us, and from these rough materials to forge our own standing in the community where we live. Our daily wants impel us to exercise our faculties, and the love of acquiring, that sentiment so deeply implanted in the human breast, and so universally diffused among mankind, has caused the wilderness to bud and blossom like the rose—has transformed

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the earth from an uncultivated wild into one vast storehouse of subsistence and enjoyment.

What can be more acceptable to the patriot and philanthropist than to see their fellow men raised above the degrading influence of tyranny and indolence, to the free and laudable enjoyment of the bounties of their Creator. To see the cultivated country—the waving fields of golden grain—the fragrant meadow—the flocks and herds gamboling upon the green sward—the beautiful garden and the tasteful dwelling—while the owners of these good things are under the influence and guidance of the principles of our holy religion, and elevated by the refinements of science? They partake of the fruits of their own industry, and feel a proud consciousness that they eat not the bread of idleness or fraud; that their gains are not wet with the tears of misfortune, nor wrung from their fellow men by avarice or extortion. Well may men thus cultivated and thus employed sit down under their own vine and fig tree, without fear or molestation, and shed a healthful influence upon all around them.

It might, perhaps, be supposed that nothing new could be advanced upon the subject of Agriculture. Since this has been an occupation which has engaged the attention and study of man from the earliest ages of his existence, it might be supposed that the experience of many generations would have systematized this department of knowledge, and reduced to certainty those rules upon which practical success depends. Yet so far is this from being the fact, that through our ignorance of Nature and its laws, from a want of perseverance and observation, and a rigid analysis of cause and effect, nothing has been more devoid of system, or more uncertain in practice, than the profession of Agriculture. The question then arises, in view of the increasing importance of an improved system of Agriculture, how shall the end in view be obtained. Among the most obvious methods of securing this object, is that pursued by almost every other vocation, viz: an association of effort. Instead of the farmer working at random, or by the light of such aids as his own experience suggests, let his knowledge be enlarged and his information extended by an interchange of opinion and familliar intercourse with others in the same pursuit. If in other pursuits it be necessary to concentrate into a sort of common stock, all the particular knowledge which can be collected; if the man of science must

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have his Institute, where he and his cotemporaries may exhibit the result of their researches, and thus each avail himself of all the facts collected by the whole; if the Merchant must have his Board of Commerce; the Manufacturer his League; in short, every department of business or science concentrate knowledge in this way—the farmer also must have his Association, for without *his* labor all other enterprises must cease to exist. And here we have an association for the very purpose of improving Agriculture. We must increase this store of knowledge by enlisting a greater interest. Every agriculturist in Genesee county should be a member of this Society, and lend his influence and a little of his cash to give it a more permanent standing. Competitors for premiums are required by the Society to accompany their statements of any crop, with the method of culture. These statements are the property of the Society, and are accessible to every member. Here then is a fund from which we may draw valuable information.

I am aware that "book learning" has, in many instances, been despised as unfit for the realities and practical details of a farmer's life. But is it so? Are men who are engaged in the vocation of farming, independent of the knowledge derived from books? The pursuits of the farmer, with proper economy, and a judicious division of time, are consistent with the prosecution of science, and the acquisition of that knowledge, too, which will enable him to discharge all the relations of life with as much prudence, understanding, and fidelity, as him whose only pursuit is study—and knowledge, too, which mingling its streams with the mighty current of human affairs, will teach industry, temperance, and frugality, and carry refinement to every cottage home. The farmer cannot gather grapes of thorns, or figs of thistles; nor can he reap the fruits of knowledge without its care and cultivation.

Therefore, farmers of Genesee County, make an effort while you cultivate the soil, to cultivate your minds. If you find any noxious weeds, how readily, and with what care you pluck them up root and branch. Should you, in the cultivation of the mind, find any bad passions or habits, be as thorough in eradicating them; and thus stand out in bold relief before the world, as eminent for intelligence and refinement, as you are for your system of agriculture. You have within your reach all the elements for a systematic course of farming. I hope you all avail yourselves of the "Michigan Farmer." This one item, for the

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trifling cost of a few shillings, will give many useful experiments and hints on farming.

Our climate and new soil, and local condition, require a peculiar application of well established principles. What may answer the purpose well in England or Germany, may be entirely unadapted to our situation. We must have a system of our own, and not attempt to follow examples which have not been thoroughly tested in our own locality; for nothing in this matter may be taken on trust. But when a discovery is made, accompanied by a written statement of the process of culture, it is unwise not to give it a fair test. Nor should a system be condemned until we have conformed to all the particulars which were practiced by the operator in making the discovery.

I have heard many farmers speak contemptuously of "Book Farming." If it be meant by "Book Farming" that the farmer shall blindly follow the directions given in agricultural works, independent of his own judgment and the nature of the soil upon which he operates, then I would say, abandon it altogether. Man was never destined to become such a mere machine. He feels and knows that his judgment, guided by all the light he can obtain, is what should regulate his actions. But who will deny that he may receive many valuable hints by consulting books? "Give us light," is the distinguished cry of the present age, and we farmers need more light upon every branch of business. It is scarcely necessary to remark to persons of the experience of most of my hearers, that doubts are daily expressed as to the expediency of each and every step of our progress in husbandry. What manures are best? When and how may they be best employed? When should land be plowed, and how should the furrow be laid? How should corn be planted and cultivated? Is late or early sowing most advisable? At what state of maturity should grain and grass be gathered, and how cured? How may we prevent the ravages of insects? What crops are most profitable, and what rotation of crops is most advisable? These and numerous other questions are all debatable and debated by practical farmers. Then do not reject any means of information as unworthy of your attention. But rather seek light in any and every direction whence it may offer itself.

One more important subject for the farmer to attend to, is his domestic animals. Experience has shown, that all animals, when well fed,

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well cared for, and well housed, can be supported at much less expense, and would be much more capable of performing their duty to us, than if left to battle in an unprotected state, with the cold and storms of our inclement and changing climate. A certain amount of animal heat is necessary to the health, and also to the existence of every animal. Heat, it is well known, is obtained by the consumption of the very materials which under other circumstances, would be used to form the flesh and fat of the animal. If then, by a suitable protection from cold without, we prevent the escape of an undue proportion of heat, we actually save to ourselves the food which would be required to replenish it, and at the same time have the satisfaction of knowing that we add materially to the physical comfort of our animals. Good economy, as well as humanity requires of us to furnish all animals with an abundant supply of good food, suited to their condition, and agreeable to their palate. In this way we shall not only render the animals themselves more comfortable, but our returns from them will be far greater. The next thing which is of equal importance, so far, at least, as profits are concerned, is to select the best breeds of stock. Under ordinary circumstances, it costs no more to raise a fine, valuable animal, than to raise one of inferior grade, and perhaps the one would readily sell for twice or thrice as much as the other. There is a custom, somewhat prevalent in our new country, to keep more stock than the farm can well support. They are turned out to shift for themselves for a large portion of the year. These cattle are taken into the yard during the more severe part of winter, and if in the spring they rise alone, they are called wintered. Now this I deem to be bad policy. What is gained in one direction is more than lost in the other. Aside from the trouble and expense of hunting them up in the fall, they frequently get a scanty living, and in many instances do not attain as much growth at three years old, as cattle well reared do, at two.

But the great and all-engrossing object of the farmer should be, so to replenish his grounds with manure, that his farm shall not deteriorate into barrenness, but grow better and better. Everything which has life, must have food, vegetables as well as animals, and to supply the most and best food at the cheapest rate, is the perfection of husbandry. Such a succession of crops should be cultivated, as will enable him not only to receive the greatest present return, but such as will

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enable him for years to come, to receive the richest reward from the soil, while at the same time that soil should be continually improving.

Any system which proceeds on any other basis than this, will run out the very best of land. It is a truth which will always remain, that the soil, though a bountiful paymaster, will cease its dividends, unless its capital be sacredly supplied. I have often thought of the amount of meaning contained in a remark of John Randolph, to the tobacco planters of Virginia.

They complained that their crops were becoming less and less. "Why," said Randolph, "you are in the habit of annually barreling up your soil, and sending it to Europe." How many of us are barreling up our soils and sending them to New York in the form of flour! The subject of manuring is one of deep interest to every farmer. On its judicious and continued application, with economy in the expenditure of labor, so as to render the farm profitable, depends the success of the farmer. Any system which is so expensive as to overbalance the income of the farmer will not answer. But that system which leads to improvement, and at the same time adds to the wealth of the farmer, is the system we need.

We have in this county a great variety of soils. In some localities lands are very rich, and would seem to those who cultivate them, to be inexhaustible in their natural resources. I well remember when a boy, to have heard stories of the Genesee country in New York, (as it was then called,) that its richness was beyond a parallel. It was said that farmers there could make no use of manure, and when it crowded too hard upon their barns, they would cart it off and dump it in the river. If the river was too far off, they had no alternative left but to move their barns to some other place, and thus be rid of it.

I will not vouch for the truth of the above report, but one thing I do know for certainty, *i. e.*, it is not so now in the Genesee country. One of the very first objects of the farmer in that section, is to make the most manure possible on his premises, and then purchase large quantities of plaster, lime, leached ashes, &c., and carefully spread them upon his lands. Our County is new and very productive, but every crop we take from our farms, exhausts their natural resources, and as a consequence will, sooner or later, diminish the abundant returns they

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now make us. Therefore, wisdom would say, keep the capital stock well supplied.

There is another subject to which I wish to call your especial attention. I believe at the present time we are nearly or quite free in this county from those noxious weeds which infest older countries. I mean the Canada Thistle and Red Root. Whenever these weeds get the start on farms, they nearly or quite ruin them for wheat growing. Now, gentlemen, you cannot be too cautious in watching these weeds. The Red Root was introduced in western New York, by purchasing clover seed which contained it. A little observation will detect it. This seed is but a little larger than clover seed and nearly of the same color. Its shape, however, is not like clover seed, which is round, but nearly the form of buckwheat. Farmers are sometimes under the necessity of purchasing clover seed, and they should be very cautious if it be foreign seed. If this pest should ever visit us, we shall find it an unwelcome intruder, and its stay will be nearly durable.

I have heard reports of small patches of the Canada Thistle in Flint and Davison, but know nothing of it certainly. If such be the case, gentlemen, be vigilant in keeping it within its present limits, for it can be said of that, as it is said in the good Book: "one sinner spoileth much good."

I have serious doubts whether any remedy has ever been discovered which will entirely eradicate these two plants. I have seen several methods tried, but when binding wheat where they ever had been, my hands always felt the evidence of their existence.

The life of the farmer is a life of severe toil, but at the same time it is rich in the comforts which it affords, and richer still in the independence which springs from it. He lives not alone for himself. The blessings which his calling is to bequeath to posterity, invests it with an unusual degree of interest. He lives for the benefit of mankind. No country can prosper without him, and no government exist without. He builds our school houses and roads, and contributes largely to the construction and support of our temples of worship. Then, fellow farmers, be not ashamed of your calling, but rather be proud and truly thankful that under God your lot has been cast in this pleasant and fruitful coun-

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try, and under a government whose benign influence secures to you all the privileges of civil and religious liberty. Let our efforts be directed to perpetuate the blessings we enjoy to the latest posterity. We owe a duty to the Agricultural Society of this county. The active and paying members of the Society are far too small. We should adopt a plan to increase our numbers. I have a plan which I shall offer for the consideration of the Executive Committee. I propose that a committee be appointed in each town to solicit farmers to become members and pay their admission fee of fifty cents each. The members of this committee should be furnished with tickets which will then allow to them all the privileges of the Society, including the Fair. These town committees should report to the Society previous to the Annual Meeting, and pay their funds into the hands of the treasurer. I think this would stir up an interest and the next Annual Meeting would be attended by several hundred farmers. By this course, a large fund might be raised to be distributed as premiums, and the premiums made much larger and more extensive. I am satisfied that some plan of this kind would arouse an interest in the doings of the Society never before felt.

Permit me, before I close, to offer a word to the ladies who have honored us with their presence on this occasion. I tender to you the thanks of the Society for the interest which you have manifested in our efforts to improve the husbandry of the country. In its improvement you are most deeply interested, and your toils will be lightened—your pleasures increased, as the business of farming shall be made to rank as high as its importance deserves. Your smiles and your encouragement are all powerful in stimulating us to great exertions in this good work.

I think that old familiar song expresses about the right sentiment:

> "The Lords of creation men they call,
> And *they* think they rule the whole;
> But they're much mistaken after all,
> For they're under woman's control."

Your influence as sister, daughter, wife, or mother, is almost omnipotent for good or evil; and perhaps it is in no instance exerted with more effect than upon the young and tender mind—to guide, instruct, and direct the youth in his path to manhood. Your presence here to-day is most gratifying, and the articles of ornament and utility which you have presented for exhibition upon this occasion, add materially to this

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show, and will be remembered with pleasure by all who are here. Continue to lend us your influence, and I have no doubt the future exhibitions of the Genesee County Agricultural Society will be second to none in the State.

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REPORT

OF THE HILLSDALE COUNTY AGRICULTURAL SOCIETY.

HILLSDALE, January 7th, 1854.

J. C. HOLMES, Esq., *Secretary of Michigan State Agricultural Society:*

SIR—Herewith I send yon the Report of the Executive Committee of the Hillsdale County Agricultural Society, for the year 1853.

The Society, although of only three years standing, has done much for the agricultural interests of the county, and its influence is fully appreciated by the farming community, as will appear by the report.

Yours, &c.

J. H. McCOLLUM.

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The Executive Committee of the Hillsdale County Agricultural Society, for 1853, beg leave to report:

That during the year 1853, the agricultural interests of the county have been exceedingly prosperous. Bountiful harvests have crowned the labors of the husbandman, and remunerating prices are contributing to replenish his purse.

While the farmers have thus been encouraged in their labors, your Society has received their hearty support, and its interests have been very much promoted by them.

Three Annual Fairs have been held by your Society, and each one has exceeded its predecessor in the degree of interest manifested by its patrons, the number of articles that were entered for exhibition, the amount of premiums awarded, and the amount of receipts; and al-

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though, each year there was a large advance in the amount of premiums offered, based in part upon the amount of funds raised and appropriated by the Board of Supervisors, under the law, for the benefit of the Society, yet thus far the amount of receipts, aside from the amount thus raised and appropriated, has been sufficient to pay all premiums and meet all expenses, and leave a balance of $195 82 in the hands of the Treasurer. This certainly must be exceedingly gratifying to the friends of the Society.

A new feature has been added to the premium list of 1853, which we would recommend to be continued in lists of premiums hereafter to be offered. We refer to the plan of awarding agricultural books and periodicals, as premiums. Those who have received premiums of this kind, have expressed much satisfaction, and have manifested a preference for them, over money premiums alone. Agricultural books and periodicals to the amount of $86 00 have been awarded.

The Hon. F. W. Curtenius, of Kalamazoo, delivered the address on the occasion of the Fair, and by a vote of the Society, as also a concurring vote of your committee, he was requested to furnish a copy of the same for publication, which said requests were duly communicated to him by the Secretary, but, we regret to say, we were unable to prevail on him to gratify our wishes.

That the agricultural interests of the county may be greatly benefitted and advanced, by the means which your Society affords of disseminating intelligence, and the opportunity it gives to the farmers of the county and others, of exhibiting their stock and productions, and of comparing notes and views relative to the same, we have no doubt, and we trust the time will be far distant, when its beneficial influences shall cease to be felt.

All of which is respectfully submitted.

J. H. McCOLLUM,
Secretary.

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REPORT

OF THE IONIA COUNTY AGRICULTURAL SOCIETY.

At a meeting of a portion of the citizens of Ionia county, held at the Eagle Hotel, on the 27th of April, Hon. Henry Bartow in the chair, J. B. Welch, Vice President, and H. F. Baker Secretary, the following resolutions were adopted unananimously:

Resolved, That measures be taken to form an Agricultural Society.

Resolved, That Henry Bartow, of Lyons, Horace F. Baker, of North Plains, J. B. Welch, and Wm. S. Brown, of Ionia, Theodore Jacques, of Keene, R. R. Cook, of Otisco, Hervey Bartow, of Portland, be a county corresponding committee, with instructions to appoint one or more persons in each township to act with them in carrying out the object of the meeting.

Resolved, That the proceedings of this meeting be signed by the Chairman and Secretary, and published in the Ionia Gazette.

Resolved, That this meeting adjourn till to-morrow morning, at 7 o'clock, A. M.

HENRY BARTOW, *President.*

H. F. BAKER, *Secretary.*

APRIL, 28th, 7 o'clock, A. M.

Corresponding Committee met pursuant to notice last evening. Henry Bartow in the Chair, H. F. Baker, Secretary.

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On motion,

Resolved, That an Executive Committee of three be appointed at the county seat, to facilitate business operations.

Resolved, That Erastus Yeomans, W. S. Brown, and Cyrus Lovell, be said Executive Committee.

Resolved, That Willard L. Brooks of Danby, Jas. L. Newman of Portland, A. L. Roof of Lyons, Myron King of Orange, Joseph Brown of Ionia, Alonzo Sessions of Berlin, Edson English of Boston, Mr. Nash of Campbell, G. W. Germain of North Plains, Wm. Freeman of Ronald, Almon Charles of Orleans, R. R. Cook of Otisco, D. S. Brownell of Easton, Jas. Baird of Keene, Geo. Richmond of Odessa, and B. D. Weld of Sebewa, be a corresponding committee for the towns.

HENRY BARTOW, *Chairman.*

H. F. BAKER, *Secretary.*

CONSTITUTION.

The Agricultural Committee of the different towns of Ionia County, convened at the National Hotel, pursuant to public notice, on Saturday, the 20th August, at 1 o'clock P. M., and organized by appointing E. Yeomans, Chairman, and W. S. Brown, Secretary.

The following Constitution was submitted, discussed, and adopted:

SEC. 1. This Society shall be called the Ionia County Agricultural Society, and its object shall be to promote agriculture, horticulture, household and mechanical arts, in the County of Ionia.

SEC. 2. Any person being a resident of this county, by signing this Constitution, and paying fifty cents to the Treasurer, shall become a member, and the annual payment of fifty cents on or before the first day of September, shall continue his membership.

SEC. 3. The officers of this Society shall consist of a President, one Vice President in each town in the County, a Recording and a Corresponding Secretary, and a Treasurer; and an Executive Committee, to consist of five persons, including the President and Recording Secretary—all to be elected by ballot at the Annual Meeting of the Society for the election of officers, on the second Wednesday in January in each year, and are to hold their offices for one year, or until others are

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elected in their places; excepting the first election, which shall be at the time of the adoption of this Constitution, and the officers then elected shall hold their offices only to the time of the regular Annual Meeting in January next.

SEC. 4. The duties of the President, Vice Presidents, Recording and Corresponding Secretaries, shall be such as usually pertain to such offices, and such also as may be prescribed by the special order of the Executive Committee.

SEC. 5. The Executive Committee shall exercise a general supervision over the affairs of the Society; appropriate the funds of the same in such a manner, as shall, in their judgment, best subserve the interests and promote the objects of the Society; call special meetings—appoint Committees to award premiums, and determine all matters connected therewith—distribute seed, plants, books, &c., received for the Society—hold the Annual Fair or Exhibition, and make all necessary preparations therefor.

SEC. 6. The President, or in his absence one of the Vice Presidents, who may be appointed, shall preside at all meetings of the Society; and in all meetings of the Executive Committee, when the President is absent, the members thereof present shall appoint one of their number to fill the Chair. All orders drawn on the Treasurer for the payment of moneys, shall be signed by the Secretary and countersigned by the President; and the Secretary shall keep an accurate account of all the moneys so drawn.

SEC. 7. The Corresponding Secretary shall receive and answer all communications addressed to the Society, or any of its officers, under the direction of the Executive Committee.

SEC. 8. The Recording Secretary shall keep a full record of the proceedings of the Society and a list of its members. He shall also be Secretary of the Executive Committee, and keep a record of their proceedings, and also perform such other services as the Committee may from time to time assign to him.

SEC. 9. The Treasurer shall receive all the monies of the Society, and expend the same only by the direction of the Executive Committee, on the orders of their President and Secretary. He shall keep a correct account of all the receipts and expenditures, and make a written report at each annual meeting of the Society. He shall execute a bond

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with sureties, for the faithful performance of his duties, in such penalties as the Executive Committee may require.

SEC. 10. The Executive Committee shall draft a code of By-Laws for the government of the Society and submit the same for their consideration at the first annual meeting in January next.

SEC. 11. This Constitution may be amended at any annual meeting by a vote of two thirds of the members present.

SEC. 12. No officer of this Society shall receive any compensation for his official services except the Recording Secretary—who shall receive such sum as the Executive Committee shall deem reasonable.

After which the following gentlemen were elected officers of the Society:

President—Erastus Yeomans.

Vice Presidents—Cyrus Lovell, Ionia; J. H. Beckwith, Lyons; John Milne, Portland; B. D. Weld, Sebewa; W. L. Brooks, Danby; Myron King, Orange; Geo. Richmond, Odessa; Alonzo Sessions, Berlin; Mr. Nash, Campbell; Ami Chipman, Boston; Theo. Jacques, Keene; Dan. S. Brownell, Easton; Gilbert Caswell, Otisco; Seneca King, Orleans; Wm. Jennings, Ronald; Hiram Brown, North Plains.

Recording Secretary—E. R. Powell.

Corresponding Secretary—Wm. S. Brown.

Treasurer—Palmer Taylor.

Executive Committee—John B. Welch, Thomas Cornell, John R. Stone.

A resolution was adopted requesting Cyrus Lovell to address the citizens of the county on the subject of Agriculture at a general meeting of the Society to be holden on Wednesday evening, the 20th of October next.

P. S.—At a subsequent meeting of the Executive Committee, Wednesday, the 26th of October, was appointed for holding the County Agricultural Fair.

E. YEOMANS, *Chairman.*

W. S. BROWN, *Secretary.*

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REPORT

OF THE JACKSON COUNTY AGRICULTURAL SOCIETY.

JACKSON, April 7th, 1854.

J. C. HOLMES, Esq.—*Dear Sir*—Herewith I send you an abstract of the transactions of the Jackson County Agricultural Society, for the year 1853.

The Executive Committee held a meeting at Jackson, December 7, 1852—when it was resolved that a sum not less than $300, be expended for premiums at the ensuing Annual Fair. Also, that the Annual Fair be held at Jackson, in said county, on the 5th and 6th days of October, 1853.

At a subsequent meeting, holden at Jackson, September 3, 1853, a list of premiums was prepared and published, together with rules and regulations for the Fair.

Yours, respectfully,

R. LANDON,
Secretary.

FIRST ANNUAL FAIR

OF THE JACKSON COUNTY AGRICULTURAL SOCIETY, HELD IN THE VILLAGE OF JACKSON, ON WEDNESDAY AND THURSDAY, THE 5TH AND 6TH DAYS OF OCTOBER.

The grounds used for the Exhibition were the Public Square, north of Main street, and the street and adjacent lands thereto. These were

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fenced and used for animals, machinery and heavy articles. The Court House was used for fruit, vegetables, grain, domestic manufactures, fancy work, &c. The first day was principally taken up in the entering of articles for exhibition. A much larger number were entered, than was anticipated by the Executive Committee. A part of the day was unpleasant—notwithstanding, a large number of people were in attendance, both male and female. The several committees received their books, and commenced their examinations.

The second day was very fair—the number of articles very large—many having been entered on the morning of the second day. This created a little confusion. It is sincerely hoped that it will be avoided another year. Everything should be entered on the first day, and before the committee receive their books. The show of cattle was unexpectedly large, many of which were of superior quality. The sheep department, though not large, was highly creditable to our enterprising farmers—exhibiting, in excellent condition, all the good qualities found in any portion of the United States. The exhibition of fruit was remarkably fine. Gentlemen in attendance at the State Fair, recently held at Detroit, pronounced ours superior to that. The apples in particular, were very large, fair and delicious. Look back ten years. What a contrast! and how cheering. The exhibition of horses was large, and said to be good. In fine, everything was beyond the expectations of any one. The attendance was immense, and all seemed to be gratified and highly pleased.

This is our first Fair, brought about under very discouraging circumstances. Let the next improve and surpass it. If any prejudice still exists, let it be discarded—we should visit these exhibitions with earnest interest. We can see, and examine for ourselves the most improved agricultural implements—horses, cattle, sheep and swine—superior fruits and vegetables and seeds—and compare these improvements with our own, and make changes for the better. Here we can greet old acquaintances, and form new ones—talk over the matters of the farm and the work-shop—ascertain the manner the most skillful and successful farmer manages his farm, and note the difference—learning of each other and liberalizing each other's minds.

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At 2 o'clock P. M., the viewing committees having finished their labors, an exceedingly eloquent and interesting address was delivered before the Society, by the Rev. Chas. Fox, of Grosse Isle, and one of the editors of the Farmer's Companion. The attendance was so large, not one-half present, could get within the sound of his voice. At its conclusion, on motion of Nicholas Townly, Esq., of Tompkins, the thanks of the Society were tendered to Mr. Fox, for his very able address, and a copy requested for publication. The several committees then made their reports, as follows:

CATTLE.

CLASS I.—SHORT HORNS.

The undersigned, Committee to examine Short Horns, having discharged the duty assigned them, report as follows:

2.	J. G. Cornell, best bull 3 years old, 1st premium,	$3 00
1.	S. M. Palmer, 2d " 4 " 2d "	1 00
7.	James De Puy, best bull 2 years old, 1st premium,	3 00
8.	" best cow 5 " 1st "	3 00
5.	Harvey Austin, 2d " 3 " 2d "	1 00
13.	D. C. Vickery, best heifer 2 years old, 1st premium,	3 00
6.	Harvey Austin, 2d best heifer 2 years old, 2d premium,	1 00
10.	E. Belknap, best bull 1 year old, 1st premium,	1 00
11.	" best heifer 1 year old, 1st premium,	1 00
15.	H. Austin, " " calf, 1st premium,	1 00
16.	D. C. Vickery, bull calf, 2d premium,	50

R. J. CREGO,
D. C. VICKERY,
JAS. VIDETO,
Committee.

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CLASS II.—DEVONS.

8.	J. A. Nichols, best bull 3 years old, 1st premium,	$3 00
15.	O. W. & G. P. Bennett, 2d best bull 3 years old, 2d prem.,	1 00
4.	J. M. Jamieson, best bull 1 year old, 1st premium,	1 00
2.	John Church, 2d " 1 " ".	1 00
12.	J. A. Nichols, best bull calf, 1st premium,	1 00
16.	O. W. & G. P. Bennett, best cow, 1st premium,	3 00
14.	J. A. Nichols, 2d " 2d "	1 00

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5. J. M. Jameison, best heifer 2 years old, 1st premium,..... $3 00
10. J. A. Nichols, 2d " 2 " 2d " 1 00
17. O. W. & G. P. Bennett, best heifer 1 year old, 1st prem., 1 00
19. M. Shoemaker, best heifer calf, 1st premium,..... 1 00
13. J. A. Nichols, 2d " 2d " 50

H. AUSTIN,
CHESTER WALL,
JESSE HURD,
Committee.

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CLASS III.—CROSS BETWEEN BLOOD AND NATIVE.

The Committee on Class 3d, beg leave to state that the bringing of crosses of pure blood cattle in competition with the same blood mingled with Natives, has imposed on said Committee an exceedingly difficult and delicate task; and had *all* the difficulties been earlier known, said Committee would hardly have been persuaded to enter upon the task assigned them. With the most earnest wish to deal justly between man and man, the Committee feel it will be out of their power to give general satisfaction. Some cattle entered on their books were not found, and some found on the ground, could not be identified by reference to their books.

13. J. G. Cornell, best bull 3 years old, (no competition,) 1st premium,..... $3 00
16. H. Austin, best bull 2 years old, 1st premium,..... 3 00
37. Oliver Hampton, best bull 1 year old, 1st premium,..... 3 00
40. E. Smead, 2d " 1 " 2d " 1 00
32. O. W. & G. P. Bennett, best bull calf 4 months old, 1st premium,..... 1 00
6. L. B. Potter, 2d best bull calf 6 months old, 2d premium, 50
35. D. C. Vickery, best cow 3 years old, 1st premium,..... 3 00
45. W. P. Kassick, 2d " 3 " 2d " 1 00
17. H. Austin, best heifer 2 years old, 1st premium,..... 3 00
46. W. P. Kassick, 2d best heifer 2 years old, 2d premium,... 1 00
36. D. C. Vickery, best heifer, 1 year old, 1st premium,..... 1 00
9. S. A. Randall, 2d best heifer 2d premium,..... 1 00
19. R. E. Aldrich, best heifer calf, 1st premium,..... 1 00
45. H. A. Hayden, 2d " 2d " 50

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8. S. A. Randall, best yoke of 1 year old steers, 1st premium, $1 00
22. Jas. A. Nichols, 2d " 1 " 2d " 50
25. Edward Belknap, best 10 cows and 14 calves, 1st premium, 3 00

This lot was composed of Native cows, with other calves. The calves were half Native and half Durham. A fine group.

THOMAS ROSE,
JAS. A. NICHOLS,
H. S. HOLCOMB,
Committee.

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CLASS IV.—NATIVES.

20. E. Delamater, best yoke of 4 year old steers, first prem., $3 00
23. Alden Hewitt, 2d best yoke of four year old steers, 2d premium, 1 00
7. T. J. Blake, best yoke three year old steers, first premium, 3 00
18. A. F. Streeter, 2d best yoke of three year old steers, 2d premium, 1 00
26. Arza Eastman, best yoke of two year old steers, first premium, 3 00
4. A. R. Winchell, second best yoke of two year old steers, 2d prem., 1 00
16. C. L. Merriman, best cow, first premium, 3 00
17. O. W. & G. P. Bennett, second best, second premium, 1 00
21. Amasa Pardee, best yearling heifer, 1st prem., 1 00
22. J. L. Mitchell, 2d " " 2d prem., 50
24. A. V. Berry, best pair of yearling steers, 1st premium, 3 00
9. W. W. Wetherby, second best pair yearling steers, 2d premium, 1 00
10. W. W. Wetherby, best bull calf, 1st prem., 1 00
19. Wm. Pool, 2d " " 2d " 50

M. L. RAY,
H. G. COLE,
SHERMAN RANDALL,
Committee.

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CLASS V.—WORKING OXEN.

2. D. Freeman, best yoke working oxen, 1st prem., ... $3 00
4. M. W. Southworth, second best yoke of working oxen, 2d prem., ... 1 00
15. A yoke of steers, four and five years old, owned by S. Bean. The Committee would have awarded a premium had they come within their list.

L. LANDON,
CYRELL ADAMS,
S. W. STOWELL,
Committee.

HORSES.

CLASS I.—BLOOD HORSES.

2. S. S. Vaughn, best brood mare five years old, first premium, ... $3 00
10. R. E. Aldrich, best stallion 5 years old, for speed and bottom, and adapted to the road, ... 3 00

The Committee examined the horse Black Hawk, four years old, No. 11, entered by Wheeler Miles, (foreign,) not of this class, and find him a superior animal, and for all work, a first class horse, and would recommend a premium.

They also examined the horse Morgan, 18 year old, No. 5, entered by Royal Bullock; he possesses many good points, and for all work, a first class horse, and would also recommend a premium.

They also examined a mare and colt exhibited by S. S. Brown of Concord. Colt by Glencoe; the best colt on exhibition.

H. A. FRANCISCO,
J. A. HIGGINS,
J. L. BUTTERFIELD,
Committee.

CLASS II.—ALL WORK.

43. T. C. Lewis, best stallion 4 years old, first premium, ... $3 00
5. M. Lantiz, second best stallion, four years old, second premium, ... 1 00

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1. A. Murray, best stallion, three years old, first premium, ... $3 00
17. A. Charles, second best stallion, three years old, second premium, ... 1 00
28. J. Longyear, best stallion, two years old, first premium, ... 2 00
6. M. Lantiz, second best stallion, two years old, second premium, ... 1 00
11. S. Quigley, best colt 1 year old, 1st premium, ... 2 00
37. A. F. Streeter, second best colt, one year old, second premium, ... 1 00
25. H. B. Lathrop, best mare, 4 years old, with foal at foot, 1st premium, ... 3 00
45. A. H. Delamater, 2d best mare 4 years old, with foal at foot, 2d prem., ... 1 00
10½. W. Worden, best colt 3 years old, 1st premium, ... 2 00
3. T. Burchard, 2d best colt 3 years old, 2d premium, ... 1 00
48. G. L. Gavett, best colt 2 years old, 1st premium. 2 00
63. A. Bean, 2d best colt 2 years old, 2d premium, ... 1 00

L. D. TRACEY,
MARTIN LANTIZ,
G. COOLBAUGH,
Committee.

CLASS 3—MATCHED HORSES.

3. G. W. Woodworth, best pair of horses 4 years old, for all work, 1st premium, ... 3 00
7. M. Knapp, best pair of carriage horses—best matched on the ground, 1st premium, ... 3 00
5. Knickerbocker & Son, best single horse, ... 1 00
62. J. Baker, best pair 2 year old colts, 1st premium, ... 2 00

S. S. VAUGHN,
HENRY INNIS,
ALDEN HEWIT,
Committee.

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CLASS 5—MULES.

The committee on mules would beg leave to report as follows:

5. Arza Eastman, best pair of mules 3 and 4 years old—1st premium, ... $3 00

And as there is no second premium, we would recommend that the Society award a second premium to

4. Wm. O. Stone, 2d best pair of mules 4 years old, ... 1 00

We also recommend a premium to Hiram Gardner, No. 2, best Spanish Jack. Also No. 1, Thomas Burchard, best Jenny, $1 00.

HARRY HURD,
ARZA EASTMAN,
WM. O. STONE,
Committee.

SHEEP.

MERINOS AND THEIR GRADES.

The committee have divided the Merinos into three classes.

CLASS 1.—FRENCH MERINOS.

29. James Videto, best buck, 1st premium, ... 2 00
11. " best 5 ewes, " 2 00

CLASS 2.—SPANISH MERINOS.

10. J. J. Maxon, best buck, 1st premium, ... 2 00
3. A. R. Winchell, 2d best buck 2d premium, ... 1 00
14. A. A. Spaulding and E. R. Croft, best 5 ewes, 1st premium, ... 2 00
21. Ben. Stevens, 2d best 5 ewes, 2d premium, ... 1 00

CLASS 3.—CROSSES OF THE MERINO FAMILY.

7. W. W. Weatherby, best buck, 1st premium, ... 2 00
2. David Chapel, 2d " 2d " 1 00

H. K. FRITZ,
J. J. MAXON,
DAVID HOAG,
LEVE BABBITT,
A. H. DE LAMATER,
Committee.

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LONG WOOLED AND THEIR GRADES.

1. O. W. & G. P. Bennett, best buck, 2 years old, (full blood,) 1st premium, ... $2 00
10. E. Belknap, 2d best buck, 4 years old, Leicestershire, 2d premium, ... 1 00
11. E. Belknap, best 5 ewes, Leicestershire, 1st premium, ... 2 00

JAMES NICHOLS,
HARRY HURD,
S. H. LUDLOW,
D. W. TAYLOR,
WM. SWEEZY.
Committee,

SWINE.

1. G. G. Bibbins, best boar, 1st premium, ... 1 00
11. E. Belknap, 2d " 2d " 50
5. David Chapel, best sow, 1st " 1 00
10. Solomon Russell, 2d best sow, 2d premium, ... 50
6. D. Chapel, best litter of pigs, 1st premium, ... 1 00
15. H. Williams, best boar pig, 1st " 50

JAMES MAFFIT,
GEO. G. BIBBINS,
S. T. DEWEY.
Committee.

POULTRY.

4. B. Peckham, best collection Shanghais, 1st prem., ... 1 00
8. B. Stevens " " Dorkins " " 1 00
12. E. Belknap " " crop breeds " " 1 00
6. B. Peckham, best and largest collection raised by exhibitor, 1st prem., ... 2 00
13. E. Belknap, best collection turkeys, (white) 1st premium, 1 00
3. F. Johnson, a fine collection Shanghaes, recommend discretional prem., ... 1 00

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1. Lewis Bascom, 2 pair fan-tailed doves, recommend discretional prem., ... $ 50
14. J. T. Wilson, 3 broods domestic fowls, recommend discretional prem., ... 50
9. B. Stevens, best collection Cochin Chinas, 1st prem., ... 1 00
1. G. P. Bennett, best white Shanghai, recommend discretional prem., ... 50
10. B. Stevens, best Braham Pootras, recommend discretional prem., ... 50

WM. YOUNKIN,
STEWARD LAMB,
PATRICK TURNER,
Committee.

FARM IMPLEMENTS.

1. Pinney & Lampson, 2 grain cradles 50
1. " " 5 forks, ... 50
1. " " 2 hoes, ... 50
1. " " 2 scythe snaths, ... 50
2. Hall & Wilsey, 1 grain cultivator, class No. 1, ... 50
3. Jas. DePuy, 1 hinge harrow, ... 1 00
4. C. A. Crary, N. Y., one horse rake, Committee recommend descretional prem., ... 1 00
6. G. W. Watkins, 1 cheese press, McKinney's eccentric lever, ... 50
7. J. W. Hulin, best yankee corn sheller, class No. 3, ... 50
7. J. W. Hulin, best thermometer churn, class No. 4, ... 50
7. J. W. Hulin, 1 stove, "Farmers' Friend," prem., ... 50
8. O. C. Mosher, best sub-soil plow, prem., No. 1, ... 1 00
8. " " stubble " " " 6, ... 1 00
8. " " sod " " " 4, ... 2 00
9. " " gang " " " 5, ... 50
9. J. G. Cornell, " common cultivator, prem., No. 3, ... 50

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20. J. T. Wilson, best corn and cob crusher, prem., No. 22,.. $ 50

GRUNDALL REYNOLDS,
H. G. PIERCE,
J. M. JAMESON,
H. H. VANDERCOOK,
H. HULBERT,
Committee.

FRUIT.

CLASS I.—APPLES.

2. A. W. Daniels, best and greatest variety winter apples, 39 kinds, 1st prem., ... $1 00

17. Wm. Clapp, best fall apples, ... 1 00

CLASS II.—PEARS.

3. A. W. Daniels, best and greatest variety pears, ... 1 00

CLASS III.—PEACHES.

16. Wm. Crispell, best peck of peaches, ... 50

4. A. W. Daniels, best collection of plums, ... 50

45. P. E Pierce, best lot of nectarines, ... 50

37. G. L. Gavett, best collection of grapes, ... 50

48. J. J. Merkle, best single variety grapes, ... 50

35. J. H. Burroughs, best lot of quinces, ... 50

Mr. J. R. Palmer, presented 12 very fine quinces, but they were not entered for a premium.

Mr. T. E. Gidley, presented one peck of Malcatoon peaches, superior to any other exhibited, but they were not entered for a premium. He also presented 13 very fine varieties of apples, which were not entered for a premium.

Miss Treadwell presented one basket of New York premium peaches, which were very good.

23. Mrs. A. F. Fitch presented one jar of preserved peaches, for which the Committee recommend a discretionary premium of fifty cents.

DAVID MARKHAM,
SIMON HOLLAND,
WM. CLAPP,
J. L. BUTTERFIELD,
T. E. GIDLEY,
Committee.

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6. John King, best set of horse shoes, ... $0 50
7. Mrs. De Puy, best rag carpet, ... 50
9. O. Updike, best flour barrel, ... 50
11. M. Collamer, best bedstead, ... 50
12. " " bureau, ... 50
13. " " lot cottage chairs, ... 50
19. " " centre table, ... 50
21. F. W. Anthony, 3 oak calf skins; committee recommend premium, ... 50
22. F. W. Anthony, best pair of calf boots, very well made, and domestic manufacture, ... 50
28. Mrs. Goffe, best quilt, patch work, ... 1 50
29. Mrs. A. F. Fitch, piece of woolen flannel cloth, ... 1 00
33. Mrs. M. Dyer, best white quilt, plain, ... 1 00
35. S. Holland, best woolen carpet, 1st premium, ... 2 00
36. J. T. Weeks, 2d " 2d " 1 00
38. Pinney & Lampson, 1 screw plate, very nice; committee recommend a premium.
39. Miller & Dakin, best buggy, ... 1 00
40. " " " double carriage, ... 2 00
44. Wm. S. Crego, best double wagon, manufactured by Davis, Austin & Co., ... 2 00
45. E. Weeks, beehive; com. recommend discretionary prem.
46. B. F. Eggleston, 1 over coat; committee recommend discretionary premium.
47. B. F. Eggleston, 1 vest pattern; recommend discret'y prem.
48. " cassimere pants, " " "
49. " broad cloths, " " "
52. N. Allen, 1 overcoat, " " "
53. " 1 brown sack coat, " " "
54. " 1 brown frock coat, " " "
55. " 1 dress coat, " " "
56. " 1 satin vest, " " "
57. O. Emlay, best single harness, a very well made and substantial article; committee recommend a premium of 1 00

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59. Mrs. J. E. Beebe, best bed spread, ... $1 00
62. S. Holland, best fulled cloth, ... 1 00
66. L. Wilcox, best pair stoga boots, ... 50
74. Henry Hague, best table top, ... 50
67. J. V. Cookingham, best lot daguerreotypes, ... 50

Your Committee beg leave to state that in the articles of patch quilts, plain quilts, coverlet and bed spreads, the competition was very great. There were many exhibited, besides those that were awarded premiums, entitled to great merit—so much so that it was difficult for the committee to decide. Your Committee have thought best to give two more premiums to these articles than were specified in the list of premiums. Your Committee regret exceedingly, that there were not some one or more ladies placed on the Committee, for the purpose of examining these articles.

F. M. FOSTER,
S. G. STRONG,
E. B. FULLER,
E. DELAMATER,
L. KASSICK,
Committee.

NEEDLE, SHELL, WAX WORK.

1. Miss H. L. Cook, best case of wax flowers, ... 1 00
6. J. Wood, 1 lace veil, very nice, committee recommend a premium of 50
7. Mrs. A. H. Delamater, 1 pair of shell candlesticks, ... 1 00
5. Mrs. J. F. Terry, 1 ornamented chair, ... 1 00
30. Amanda Fitch, 1 ornamented stand, committee recommend a premium of 50
17. Miss Lapham, 1 vase tissue flowers, ... 1 00
19. Mrs. J. F. Terry, 1 hand bouquet, ... 1 00
60. Mrs. C. L. McMillan, 1 blue crystal basket, committee recommend a premium of 50
7. Mrs. Charles Church, 1 worked quilt, ... 1 00
58. Mrs. Warriner, 1 lamp mat, very nice, committee recommend a premium of 50

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9. Mrs. J. F. Terry, ornamented needlework, ... $1 00
70. Miss Eliza Turner, 1 worked collar, ... 1 00
72. J. E. Beebe, 1 ottoman, ... 1 00
25. T. E. Landon, 1 portfolio cover, ... 1 00
61. Mrs. Sarah Adams, 1 pair of linen hose, committee recommend a premium of 50
91. Mrs. L. Kassick, 1 worked handkerchief, committee recommend a premium of 50
45. Mrs. L. Blackman, 1 worked napkin, committee recommend a premium of 50
74. Misses Bradley, 1 satin bonnet, ... 1 00
76. " " 1 head-dress, ... 50

CHAS. L. MERRIMAN,
MRS. J. F. TERRY,
MISS MARY RANDALL,
Committee.

—

BUTTER, CHEESE AND HONEY.

6. Oliver Hampton, best 15 lbs. butter, 1st premium, ... 1 00
5. Alex. McGiffin, 2d best 20lbs. " 2d " 50
3. Wm. Ludlow, best 6lbs. "

This last would have been entitled to the 2d premium, had the quantity been sufficient.

4. A. W. Ingraham, 1 box honey, 1st premium, ... 1 00
8. F. F. Richardson, 1 " 2d " 50

This last was a very nice box of Colton's patent. No cheese presented.

E. H. RICE,
MRS. F. A. KENNADY,
MRS. WM. LUDLOW,
Committee.

—

VEGETABLES.

17. E. Belknap, best and greatest variety of vegetables, ... 1 00
17. " " " 6 heads of cabbage, ... 50
17. " " " 12 carrots, ... 50

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17. E. Belknap, best 12 parsnips, ... $ 50
17. " " " variety of squashes, ... 50
17. " " " white turnips, ... 50
17. " " " yellow " 50
17. " " " blood beets, ... 50
28. D. D. Tooker, best peck of potatoes, ... 50
11. John Fuller, " red onions, ... 50
30. P. E. Pierce, " tomatoes, ... 50

P. C. TANNER,
J. P. HITCHINGS,
S. B. TREADWELL,
Committee.

GRAIN.

10. L. B. Woodard, best bushel blue stem wheat, 1st premium, 1 00
1. T. B. Tooker, 2d best bushel Australian wheat, 2d premium, 50
6. W. Bronson, 12 ears yellow corn, ... 50
11. A. W. Ingraham, 12 ears white corn, ... 50
8. Wm. Clapp, 1 bushel yellow oats, ... 50
16. A. R. Winchell, 1 bushel white beans, ... 50

A. HUNT,
WM. POOL,
A. W. INGRAHAM,
Committee.

FLOUR AND BREAD.

1. P. B. Loomis, best barrel double sup. flour, ... 1 00
39. Mrs. D. Chapell, best 2 loaves of bread, ... 50

JOHN ROGERS,
MRS. D. CHAPELL,
MRS. BENJ. STEVENS,
Committee.

PLOWING MATCH.

The Committee appointed as judges of the plowing match, respectfully report that, at the time and place appointed, Messrs. J. Tooker and H. H. Vandercook appeared and competited for the purses offered, with

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horse teams, and that there were no other competitors. Taking into consideration the difference in the land plowed by them, the difference in the teams, plows and plowmen, and every thing attending the contest, in the judgment of the Committee, the contest was an equal one; and the Committee therefore recommend, that the two premiums of $4 be equally divided between them.

For the best plowing, double team, the Committee award the first and only premium of $3, to Mich'l Shoemaker, he having been the only competitor with such a team.

ELNATHAN SCANTON,
HARRY HURD,
D. W. TAYLOR,
Committee.

MISCELLANEOUS ARTICLES.

The Committee on Miscellaneous Articles, would respectfully report that, on examining the articles contained in our list, we have found a range and incompatibility of specimens that would require a versatility of knowledge and acquirements which we do not claim to possess. The transition from pictures, bouquets, botanical specimens, and tissue trees, to corn mills, plows, drags and sausage cutters, were sudden, and put us in mind of the old adage, that there is "but a step between the sublime and the ridiculous." Fortunately, however, after making the examinations, we found the flowers, paintings, and needlework, entered in class 2, in the ladies' department. We have, therefore, struck them from our list.

1. E. B. Longyear, cast-iron beam sward plow, we think possesses much merit.
2. E. B. Longyear, corn plow, should be superceded by the cultivator.
4. S. D. Blood, sausage machine; meritorious.
7. S. Holland, two bottles of wine; very fair.
20. Elias Gage, one bottle of wine; wants age.
17. Mary Lapham, one bottle of wine; fair.
21. F. Johnson, 1 barrel water-lime, the product of Jackson county. From the limited examination which we have been able to make, we think it will prove valuable.

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23 and 24. W. W. Landon, lot of bird cages, and one show-case; both meritorious.

30. A patent truss—meritorious; evidently a most ingenious and appropriate instrument, presented by Silas Pratt, of Brooklyn, the originator. We think it by far the best we are acquainted with.

All of which is respectfully submitted,

I. C. BACKUS,
J. TUNNICLIFF,
JERRY REYNOLDS,
J. P. GODFREY,
Committee.

—

After reading the reports of the Committees, the following officers were elected for the ensuing year:

President—Hon. J. G. CORNELL.

Vice Presidents—Daniel Cook, Jackson; Alvinza Hunt, Napoleon; Benj. Longyear, Grass Lake; Luther Grandy, Leoni; St. Clair Bean, Spring Arbor; John Crittenden, Concord; J. P. Wheeler, Pulaski; Thomas Rose, Hanover; LeRoy Richardson, Sandstone; Edward Delamater, Columbia; R. G. Crego, Liberty; M. J. Draper, Rives; J. A. Nicholas, Tompkins; Martin Lantiz, Waterloo; P. C. Turner, Henrietta; Benj. Peckham, Parma; S. B. Crawford, Springport.

Secretary—R. Landon, Jackson.

Treasurer—Guy Foote, Jackson.

Executive Committee—James DePuy, Spring Arbor; Harry Hurd, Henrietta; and Jas. C. Wood, Jackson.

On motion of Jas. C. Wood, it was

Resolved, That the town which raised, within six months, by voluntary subscription, the largest sum, for the purpose of fitting up a fair ground, and place the same at the disposal of the Executive Committee, within that time, should have the next County Fair.

It was resolved that the address and proceedings of the Society be published.

The Executive Committee feel that an important step has been taken to advance the Agricultural interest of the County. When they entered upon their duties not a dollar was in the hands of the Treasur-

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er. The sale of membership tickets up to the first day of the Fair, was about $100. At first they selected a piece of land in the outskirts of the village; but on inquiry, it was found necessary to expend some three hundred dollars to fence and prepare the ground. This, aside from the cost of a proper building to exhibit those articles required to be under cover, left the means on hand insufficient to pay premiums. It was then deemed advisable to place the exhibition upon the public square, and use the Court House. The cost to the Society has been but little. The result is highly gratifying—it is no longer an experiment—it is now a fixed fact—Jackson County will maintain a County Fair. We have the means of paying off all of the premiums, and have something in the hands of the Treasurer for the coming year. Next year we trust sufficient means will be had to secure a larger piece of ground for an exhibition, have it properly fenced, and in order. We congratulate the Society upon its present flourishing condition. We think it far preferable to put up with little inconvenience this year, and be out of debt, than to gratify the feelings of some, and be heavily involved. Whatever we have done, we trust has been for the best.

J. G. CORNELL, *Pres't.*

JAS. C. WOOD, *Sec'y.*

ADDRESS

DELIVERED BEFORE THE JACKSON COUNTY AGRICULTURAL SOCIETY, OCTOBER 6TH, 1853, BY CHARLES FOX, LECTURER ON AGRICULTURE IN THE UNIVERSITY OF MICHIGAN; SENIOR EDITOR OF THE "FARMER'S COMPANION AND HORTICULTURAL GAZETTE," &C.

"The first three men in the world, were a gardener, a plowman, and a grazier; and if any man object that the second of these were a murderer, I desire he would consider, that as soon as he was so, he quitted our profession and turned builder."—*Cowley.*

It is with peculiar satisfaction that I accept the invitation extended to me by your Society to deliver the address at your first Fair, to-day. It is now more than fourteen years since I arrived in Michigan, with the intention of becoming a permanent resident in, and a citizen of the State. It was in this village that I spent the two first years; and I might still have been among you, had not a failure of health obliged me to seek a change of climate. But I have never forgotten, and never shall forget, the kindness I then received, and I often look back with a longing desire, that those days of warm feeling, undisguised hospitality, and unwearied energy might return.

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There are undoubtedly many before me who came into the country about the same time; many men, and women too—whose enterprising spirits and courageous hearts were not afraid to struggle with the difficulties, and encounter the hardships of a new country; and who, leaving home and friends, and the many ties that bind the heart to the father's fire-side—the old schoolhouse, and the playmates of youth—came here to found a new Republic; and leave the impressions of their lives not only on the face of Nature, but on the hearts and intellects of generations yet unborn.

And yet, as I look around me, I cannot help reverting to the change which these few short years have wrought—a change, which if then prophesied, we should have considered a wild dream—a dream even among new western men, whose watchword was "Hope," and who knew not what "Failure" meant. Permit me, on this occasion, then, to call back your memories to the past, in order that we may compare it with the present; and thus bringing together, side by side, the fight and the struggle, the bitter labor and the sweet reward, we may feel duly thankful not only for the blessings we now enjoy, but for the merciful Providence that led our steps to this land of milk and honey, gave us the power, and enabled us to conquer.

I well recollect my first journey to this spot; many years of my life had been spent in the City of New York, when I determined to seek a western home. I was young and ardent; all around me was old and petrified into permanency; and I supposed that here there was a wider field for the accomplishing of good, than there. I endeavored, of course, to acquire some information, but I found that even the most intelligent knew no more of this State, than we at present know of Nebraska. All agreed, however, that it was a wilderness of forest and marsh, with here and there a log-house, and a solitary family. I thought myself fortunate when I met with a Connecticut man, who had actually spent some time in Michigan. He had been a contractor on the Southern Railroad—just then beginning to be graded—had had disputes with his workmen, and run away; and his account of the swamps and snakes, the hard living and the harder fevers, were enough to shake the strongest resolution. This, I assure you, was all the information I could acquire, in the metropolis of America, of a State which now ranks as eighth, as a producer of wheat, and whose name is favorably known

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throughout the civilized world. After a tedious voyage round Lake Erie, I arrived in Detroit, which was then little better than an overgrown village, prostrated by the late speculations and mercantile reverses. By the railroad I found my way to Ypsilanti, and there the railroad stopped, a stage carrying the passengers to Ann Arbor. At this place I spent a day or two with a friend; early in the morning took my place in the stage—for a stage a day was then quite sufficient for the travel—and late at night, in the darkness and rain of a heavy thunder-storm, thought myself fortunate to get to bed in Mr. Bascom's tavern. In the morning I was up early, to catch a view of my new home; and I confess, that as I looked around, my heart sunk within me. It was the first new village I had ever seen. The scattered houses and shanties, of every size and shape, looked as if they had fallen from the clouds, or sprouted, like mushroons, wherever chance might dictate. The stumps in the so-called street, were only outnumbered by the pools left by last night's rain, and a heavy, white, oppressive fog hung over and pointed out the limits both of the river and the marsh, which formed no mean portion of the village site. But when I went out, and looked around, I again took courage, for there was labor, activity, and energy on every side. Men looked like men: independent, determined, self-possessed; and I knew that though rough might be the foundation, these were minds capable of thinking, and hands capable of effecting whatever might be needed for the building.

Now look around and see what labor and intelligence have effected. The child then born, still but a boy, and yet, what has not a handful of men accomplished? They have built a city, with its goodly stores, churches and dwellings. They have surrounded themselves with the luxuries and comforts of the oldest States. They make their influence felt on every side. This is not the result of money—of coined gold or bank paper—there was little enough of that. It is the effect of industry, labor, prudence; of labor directed by intelligence. All you see is but educated labor in its results; and we may well say that such labor is the crowning glory of manhood. It is because money is the product of intelligent labor that it is in any ways honorable; and he who by his labor—especially the labor of mind and body united—takes Nature in her wildness and compels her to submit to man's rule; who hews the tree and erects the dwelling; who causes grain to grow, where nothing

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but weeds were found; who forms from social chaos an intelligent well governed society—that man is an honorable man. He has done his duty, and in his quiet, silent struggle, he is ten-fold more worthy of fame than the victorious General at the head of his army, whose only effort is death and destruction. Every act of man inscribes itself in the memories of his fellows; the air is full of sounds—the sky of tokens; the ground is all memoranda and signatures; and here, inscribed in letters that cannot be mis-read, you see the worth of labor, and the commanding capability of the human mind.

But why speak of the village alone? The country was then for miles around, almost an unbroken wilderness. And beautiful, exceedingly, it was. You who were here at an early day, cannot have forgotten the magnificent, park-like openings; the green sod stretching far and wide, interspersed with the majestic oaks; the meadows, luxuriant with their long grass, changing in color from green to white, as the wind swept over them and the sun smiled upon them; the flowers, like jewels from the skies, of every hue and gorgeous brightness; the little lakes, encircled with their swelling banks, spreading their azure bosoms to the wide eye of Heaven; the groves spotting the prairies, and breaking what would else have been monotony.

I used to think, that of all the world, for soft and luxurious beauty, this was the chosen spot; but there was one serious drawback—man was not there; there was no use attached to it; the trees grew, the grass sprung, the flowers blossomed in vain —for he for whom it was made—the heir of all this rich inheritence—had not yet come to take possession. A few early settlers, it is true, had already got their farms in order, but the difficulty of teaming produce to market was a serious one, deducting largely from the profits. A few young orchards had been planted, but I think your enterprising citizen, Mr. Cook, was the only person who had trees in bearing. For want of fruit, green tomato pies were considered a luxury. Wild hogs still roamed through the woods; and in a winter's night the howl of the wolf was the common serenade, while the bears came into the village to steal the cabbages in the gardens.

It was my duty to ride extensively through the country, and I had a good opportunity of witnessing how it was settled. That autumn and the next are supposed to have been the most unhealthy ever known in Michigan.

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Scarcely a house escaped the fever, and it was truly said that there were not persons in health sufficient to take care of the sick. Many a heart-rending scene I saw, for those were the days that tried men's souls; and day by day my respect for the perseverence, and my admiration for the patient courage of those determined men and women increased. One case, in particular, I well remember. It was some miles to the north of the village that I came upon a new farm, with a large field of ripe wheat around the log house—a house nearly a mile from any other dwelling; and, as was then my habit, I stopped to enquire if I could be of any service. The farmer was a middle-aged man, with a wife, a grown son, and several younger boys and girls. He had immigrated the year before, expending all his means in the purchase of the land, fencing, building, and getting in a large crop of wheat. This was dead ripe, and perishing on the ground, and every member of the family, except a little boy, about six years of age, was confined to bed with bilious fever. On this child depended the nursing and cooking for the family, and what was worse, every drop of water consumed, was carried by him three-quarters of a mile, while he himself had the ague every other day.

But such cases were by no means uncommon; and many a time my heart has bled, as stopping at a new house, far away from neighbors, I found a young mother, accustomed to all the comforts, luxuries, and friendships of the older States, cast here into the woods, with the husband on whom all depended, confined to bed with disease, and never a soul to speak a word of cheering, to lend a helping hand, or say "God bless you." No words can tell, nor mind imagine, the accumulated suffering, and disappointed hopes of these two autumns; and yet, I can honestly say, that I never heard a murmur, nor an expression of repining. These are the men and women who settled this country—the pioneers of civilization; to whom those who have since immigrated are indebted for roads, and a thousand comforts at first unknown—these are the men and women, who, fifty years hence will be spoken of to our grandchildren, as the heroes and heroines who fought the battle of man against unsubdued Nature, and came off conquerors.

And yet what are these fine farms, good houses, extensive barns, fences, roads, school-houses, which we now see on every side—what are they but labor—the labor of man's mind and man's body? In old

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countries they forget this truth. So long have improvements been made, so often have they been bought and sold, so firmly is a money value attached to them, that men come to speak of property as equivalent to money, and the original value and scarcity of human labor is forgotten. The man, therefore, who possesses money, acquires an undue importance in society; but here, standing as we do, not only in the midst of the result of pure labor, but among the very men who accomplished that labor, the men who took an useless wilderness and subdued it to utility: standing, I say, with the result of labor and the laborers side by side, we honor the labor, we give credit to the labor, we recognize that money is only labor in another shape, and we give the credit to the man who has thus labored, and not to the money in which he has invested the results. In such a position, it is the man we honor—the hands and the sinews as the instrument, but the mind and the courage as the director and the moving power of the hands. And it is in this view of the case only, that man holds his just position in society. He who has inherited a fortune from his father, or made it by a lucky speculation, may dress in purple and fine linen, may live sumptuously, may buy the bodies of his fellow men to serve him in his indolence, but such an one, if devoted merely to self-indulgence, is utterly contemptible by the side of the hard-handed settler of a new country, who has brought a trained and educated mind with him, who is capable of being his own master, who has taken that which is useless and turned it to utility—that which was wild and cultivated it—who has raised food for man where none was known—who has forwarded civilization, and been a blessing to his race.

Daily do I thank God that he has given me the will and the power to work, for whether it is with the mind, or with the body, work is the glory of man, indolence is his shame. If the curse delivered in Eden was that thorns and thistles shall the earth bring forth, and in the sweat of our brow must we eat bread, the curse has become a blessing, for all that is good in man is dependent on labor for its development, all that is worth possessing, depends on labor for its acquirement; and he who works the best, in the best way, for the best end, is the greatest man. Indolence, I repeat, is the shame of our race. Every human being is sent into the world to do something, to accomplish something, to leave the world better than he found it; and he who fails, through selfish in-

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dolence, in doing so, has proved traitor to his duty, and denied his parentage.

When communities become old, riches accumulate in a few hands, and the rich become idle; they live on the labor of the poor; and the evil grows apace. Tyranny and oppression, and sinful luxury, throw off the mask and forget to blush; the truth is forgotten, and error is triumphant; then labor becomes shame; the laborer is held in contempt; and the majority of mankind—slaves in soul if not in name—bow down in servile submission to the minority; money becomes power, and the world worships it; then it is that he who labors not at all is the greatest man, and the true and noble laborer—the creator of earth's wealth—sneaks into holes and corners to hide his shame, or by vain and delusive efforts tries to escape from his condition. The son, revelling in the fruits of his father's industry, blushes to hear his name, and spends in sin that which was gotten by virtuous toil. But with the very men before me, who in twenty years, by honest persevering labor, have made Michigan what it is, and raised it to its present enviable eminence, with this noble show of the results of direct, intelligent labor, it were in vain, even if we were reprobate enough to wish it, to try and conceal the truth, that honest labor is the noblest characteristic of man.

While then we pay homage to labor; while we cannot forget that our forefathers, who fought the battles of the Revolution, were men of labor like ourselves; while it is a matter of history that these men's mothers, wives, and sisters also labored in their own proper spheres, and with their own hands made the clothing which was worn throughout the country; while the Northern States are everywhere witnesses of hard, self-denying toil, and every farm, every road, speaks its own tale; while we are every day reminded that if Americans had not been industrious workers, this country could never have been settled, we must not forget that the true and perfect results of the labor of the body depend on the previous labor of the mind. The great success of American laborers, compared with those in some other countries, is not that they labor more, but they labor more intelligently. The mind has a greater share in the labor. We work not like the ox, by mere physical force, in one undeviating way, but we work like men with educated minds, ever ready to change our mode of work, and direct it to the best end, in the most intelligent manner.

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And here is the great secret of American success. We are a religious, trained, educated people. The church and the school-house are the cause of our success; and in no better or more patriotic manner can we expend the fruits of our labor, than by endeavoring to render still more efficient these humble but most powerful instruments.

The position of the farmers of America, is peculiar and different from that of most agriculturists throughout the world. They are the owners of the land; dependent on no one but themselves for a comfortable living; and exercising all the rights and privileges of citizens and freemen. They are educated and intelligent; and I honestly believe, as free from prejudices as any other portion of the community. Our Agricultural Societies and Fairs; our own peculiar newspapers, proportionably more in number, it is believed, than those of any other profession; our implement manufactories, all bear witness to the onward force of our class; while great Republics, not only governed, but well governed, in peace and happiness by farmers, is what the world has never witnessed since the days of the Patriarchs. Farmers, beyond all others, suffer from the evils of a solitary and unsocial life. Separated far from each other, confined year after year to steady toil by themselves, they have few opportunities of mixing with other men, unlearning error, and acquiring the truth; rubbing off the indolence of mind natural to humanity, and becoming inspired with ambition and zeal to excel. As has been beautifully written, "of all inventions, the alphabet and printing press alone excepted, these inventions which abridge distance have done most for the civilization of our species. Every improvement of the means of locomotion benefits mankind morally and intellectually, as well as materially, and not only facilitates the interchange of the various productions of Nature and art, but tends to remove national and provincial antipathies, and to bind together all the branches of the great human family." And considering the many hindrances in the way of social improvement which beset the life of the western farmers, it is difficult to express too high an admiration of the intelligence, vigor, and onward progress which they manifest. It is rare that comparisons can be fairly drawn, but deprive the city man of the daily society of his fellows—of his hourly risks, competitions, and emulations—take from him his daily papers and correspondence—his evening parties, and social recreations, and we greatly doubt, if placed side by side with the Michigan

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farmer—I will say the American farmer—he would find himself able to maintain his boasted pre-eminence.

But are we as a class what we ought to be, what our high professions require of us? Have we during the last half century, made as much actual progress as manufacturers, engineers, ship builders, or mechanics? As an American farmer myself, I may be allowed to speak freely and candidly on the subject. I appeal to you, does the profession of agriculture among us take the same position as an intellectual pursuit, as many others around us? I mean, do we consider that a strict education is as necessary for us as for the civil engineer, the builder of steam engines, the chemist, or the maker of woolen or cotton goods? That in itself agriculture is intrinsically intellectual, that it absorbs within itself a large proportion of other arts and sciences, that it affords a field for the exercise of the highest talent, no one who has examined the subject can deny. Accustomed, as I have been from childhood, to scientific pursuits, and unapt to be frightened by intellectual difficulties, I do assure you that after many years expended in the study of agriculture, I confess myself yet a mere pupil; and every step I take opens but a still further view of great but unexamined truths, which this noble art is capable of presenting to the human mind. As agriculture was the first to originate, so does it appear to be the last to arrive at perfection. For hundreds of ages, the human intellect has been laboriously searching after truth, yearly becoming more practical in its aims—but it is left to these latter days, for all other arts and sciences to kneel at the feet of agriculture, and, like the magi of old, pour into her lap treasures of gold, frankincense and myrrh. Allow me, then, candidly, not as a teacher, but as a friend, shortly to point out where it seems to me we may be considered deficient, and where we may amend.

I will not speak of dress or manners, however important they may be in a secondary point of view, for they are rather signs than facts. It may amuse the city dandy to ridicule the farmer on account of his home-made coat, or awkward gait; we can hardly excuse this—for the poor fellow has nothing else on which to pride himself than what he has received from the tailor and dancing master. It is not the heavy hand, nor the soft-kid covered palm that makes the man. It is the heart and the head. In the words of the old poet—

> "Worth makes the man, without it the fellow,
> All the rest is but leather and prunello."

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But we will say that farming is not a mere means of making money. Our fields are not a mint in which to coin dollars. Our profession is the occupation for life of souls as well as bodies; of minds as well as hands. A farmer has many other and much higher duties than merely raising good crops, and selling them at a good price. He is a man, and as such, immortal, with a glorious destiny beyond the grave, and all the duties pertaining to the Christian Pilgrimage are his. He is a freeman; on his action and example depends more or less the welfare of his country; and without being a politician he is bound to do all he can for the upholding of virtue, and the down-treading of vice. He is a husband and a father; on his kindness, attention, and industry, depends the happiness of one who, in the trusting affection of her heart, gave herself to him for better or worse. On his example, training and liberality, wholly depend the character and welfare of those children who are to follow him in the busy cares of life, long after the green sod has covered him, and his place knows him no more. Still further, he is a representative of a great class, and he may assure himself that every step he takes in the right direction, every new truth he brings to light, is so much added to the well being of the world, and the respectability of his profession. It is feared that we too often forget these truths; and directing our attention to business alone, we become men of one idea; we do not recognize that this is only one out of many duties; and that it is inferior to many others, as the body is to the life.

And in consequence, we do not know our profession as we ought to do. Because some foolish people ridicule it, we learn to agree with them. Because a foolish aping of foreign aristocracy—a thing utterly contemptible in this republican country—endeavors to divide the occupations of mankind into those that are "respectable," and "not respectable," and importing the worst prejudices of feudal Europe, refuses to call a man a gentleman, because he works with his hands, we give place to such rules of the social system, and we bow in spirit before them; and what is more, we teach the same mischievous error to our children, till they despise their fathers, any seek any employment, however worthless, in a city, because it is called genteel, rather than remain in the country, to be true workers, and the master of broad acres. In this, I fear, we are ourselves greatly to blame; and to this cause may partly be attributed the lamentable desertions of rural life, and the crowding to

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cities, which forms one of the peculiar social phenomena of the present day. We cannot hope that others will respect us unless we respect ourselves; and till we look upon agriculture, not as a business, fit only for those incapable of success in any other work, but as one of the most noble, most independent, or intrinsically most intellectual, we can neither expect to take our proper position in the world, nor make our influeuce felt as it deserves to be. On this I speak advisedly. It has been my lot to see and live among all classes of society. In cities, men dress better, but they do not live better; they have more amusements but fewer recreations; they have more small talk, but less thought and originality; if any individual rises to eminence and fortune, he works far harder and runs far greater risks than any farmer is called upon to do; and, depending on favor for custom or business, men in large cities lose their independence of character, and are too often either obliged to swim with the current or adapt themselves to the fancies of others. In the city there is weariness, monotony, and constant change; how few old inhabitants of cities do not long for the time when they may leave their offices and the endless streets, and spend the latter portion of their life in the bosom of the country. The love of the green fields, and of Nature, is the last feeling that fades, the last passion of poetry that expires in the hearts of city men; while in country life, all is quiet, peaceful, and enjoying, leaving little to desire and less to crave after.

> ——'Tis man's worse deed
> To let the things that have been, run to waste,
> And in the unmeaning present sink the past.

It is said, and I believe truly, that there is not an instance in the United States, of an individual becoming really great and leaving a strong impression on his generation, who was born and lived in a large city. It is the country which has given birth and vigor to all our great men, wherever, for convenience, their after lives may have been passed. In this country we have only one standard of true respectability, and that is doing our duty faithfully to God and man in the station in which our lot is cast. It is not money, it is not luxury, it is not dress or polished manners that makes the gentleman—these are the accidents of life. It is honesty, intelligence, kindness of heart, refinement of taste and feeling, and freedom from vice, which alone we should recognize as worthy our pursuits in republican America. I must confess, that I never see an open-hearted boy, as yet unspotted by the world, vigorous in health, and

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strong in his consciousness of rectitude, leave his father's farm to begin a city life, without feeling commiseration for him. It is not only the gradual learning of evil, and the narrowing of the feelings, and the stunting of the inner man which too often result; it is not the weary disappointments, and the wearing off of the gloss, from ambitious hopes —which sooner or later are the fate of most men, who set before themselves the one goal of wealth, but I view in imagination the after-life, the old age of what he is, and what he might have been—and do you believe that if he could have foreseen all this, he ever would have left his home? Certainly not, for the mere bauble of a falsely called "respectability."

I never throw a flower away,
Without an inward sigh;
To think that aught so beautiful,
So speedily should die.

We all know that it is too often the case, that if a boy shows more than an ordinary ability, the father or mother is ambitious to send him to college, and then to the city, while a heavy, stupid boy is kept at home to be the farmer. And this leads me to ask, whether in a farmer's life there is not quite as much scope for education and talent as in any other; and whether a highly cultivated mind, devoted to this pursuit, cannot make as much pecuniary profit from it as from any of the professions? I have no hesitation in declaring my belief that it is so. Agriculture is a *progressive* art; the great fortunes made by manufactures and mechanics, are the result of improvements introduced by them, together with steady industry. Farming is quite as open to profitable discoveries and improved processes, as any other productive business. Even the very best of our farmers know very little of what may be accomplished by farming when thoroughly studied and understood. Most men are content with 40 bushels of clean corn to the acre. Skillful men raise 100 bushels on the same area. Those who are the most skillful have raised 200; but is there any reason why we should stop here? There is, of course, a limit somewhere, but we do not believe that it is yet reached. Improved varieties, improved processes, improved manuring and draining may yet go far beyond our present best.

I observed before, that the reason why American labor is successful in its results, is because it is intelligent labor—because we work with mind as well as body. Now all these terms are comparative. Let us

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suppose a young, educated New England farmer to settle down in the woods by the side of one who had never entered a schoolhouse, and whose intellect was wholly untrained. The latter may be a neater ploughman; he may be physically stronger, and able to work more hours without fatigue; but supposing both equally industrious and steady, at the end of ten years which farm will be the best and whose pockets will be the fullest? I need not answer. Now the difference is, that one mind is trained to think and observe, the other is in a state of nature; and this one fact will be found to affect every operation, and the result of every operation. But suppose that our Yankee friend has only had a general education, such as is given in primary schools. He has learned to read, write and cipher, to think and discriminate, and look to the future, but he has received no particular professional education as a farmer. All he knows on this subject he has picked up as he could, by copying others and reading papers. Now carry the matter further. Drop the totally ignorant man, and place the other along side of one who has had all his advantages, but far more, who has been educated *thoroughly* —I do not mean that he can translate Latin and Greek, but has had his intellect thoroughly trained in all its faculties, and besides he has been instructed *professionally* in all that is known theoretically and practically of agriculture—of soils, manures, grain, stock, implements, book-keeping, &c. Is it not to be supposed, that other things being equal, this one would surpass the latter, as the latter surpassed the first? The contrary were opposed to everything we know of the human mind, and to all living examples. But let me clear away a difficulty. There is, I know, a deep prejudice in the minds of many farmers on this score, and it is unfortunate in the extreme that it is so. It arises from a mistake as to what the word "education" means. A farmer sends his son to a High School, and after that to College, with the express view of studying some profession. The boy looks to this end alone, is occupied in learning Latin, Greek, and Mathematics, takes little exercise, becomes dyspeptic, and when at home for vacation, not only shows little inclination or ability to work, but perhaps, as boys will do, sneers at the homely living of his family. The father, of course, feels this severely; he judges that "education" unfits a man for practical life; and he determines that his younger boys shall run no such danger. Yet it is not "education" in the abstract, but a mistaken or a too narrowed education

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which has caused this evil. If the boy had been educated with the intention of becoming a farmer, depend on it all this mischief would have been avoided; he would have had his mind trained as thoroughly as the other, but in a different way; he would have preserved his physical faculties in good order—all he learned would have increased his interest in agriculture, and on his return home he would have been a pleasant companion and a useful assistant to his father. We are too much in the habit of laying the blame on "education," while the true error lies in the *mode* of education. We would not expect a man who had been brought up a blacksmith, at once to become a good farmer; why then expect a young man who has been trained to be a lawyer or a minister to do the contrary? Depend upon it, that as agriculturists, we shall never take our due place in society, nor exercise the influence we have a right to hope for, until, as a class, we are better educated both generally and professionally. It is *mind* that makes all the difference among men. Daniel Webster was a poor farmer's boy—why do our hearts beat high at his name, and why did a whole nation, as with one voice, mourn at his death? Not because he was a lawyer, nor a statesman, but because he had the greatest mind of any man living, and this, to a great extent, he owed to education. Let us then place more reliance, for the future, upon self-improvement. If we are too old to learn, let us at least give our sons an opportunity.

The agricultural newspapers are most valuable aids to self-improvement, and much of our present progress may justly be ascribed to them. To this village and county belongs the honor of establishing the first paper of the sort in Michigan. You cannot have forgotten your old fellow-citizen, Mr. Moore—then a very young man—who with an enterprise which has since raised him to high distinction as a publisher, commenced in this village the first farming paper we had. I have lately examined the early numbers, and I assure you that for ability and justness of views, it were difficult to surpass them, even now. It affords me much pleasure to be able to pay this tribute of respect to a very worthy and talented man, and though he has long left us, we shall not forget how much we are indebted to him. It does not become me, as the editor of one of these papers, to say more on this subject; but allow me to press upon you the importance of every farmer taking and reading one or more of these journals. For one dollar a year—two

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cents a week—you can procure both a Michigan and a New York Monthly paper; and it were strange if the information you gather, to say nothing of the moral effect—does not repay you an hundred fold. You not only learn every discovery and improvement made elsewhere in your occupation, but you learn to think less of yourself; which, in all positions of life, is the first step towards advancement.

But I have already detained you too long, and in a few words let me sum up. The position of the American Farmer is a high one. He is the land-owner, the law-maker, the voter. Farmers compose the great body of our people; and in a Republic the majority are the governing power. But we find professions of not a twentieth of our number, taking the lead of us—writing our books—books which form and direct the popular mind—going to our Legislatures to govern us—to Congress to vote away our money—to foreign countries, as ambassadors, to represent us; in fact, doing the *mind-work* of the country—why is this? Because as a class we have neglected to educate ourselves. We are the Giant of Physical Force, led where he pleases by the Dwarf of Intellect. The invisible *mind* will always govern in proportion to its training. Is this to continue? God forbid! The country is imbued with the determination that it shall not. This very Fair is a declaration that you make to your fellow citizens and country, that you are determined to progress in intelligence. Go home then, with this idea in your minds, ponder on it, *act on it.* If not for yourselves, yet for your sons and daughters, for your country, for all that is great and noble in your hopes for the future, cherish and forward education, and never believe that you can reach that point where more is not to be learned.

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REPORT

OF THE KENT COUNTY AGRICULTURAL AND HORTICULTURAL SOCIETY.

J. C. HOLMES, Esq., *Secretary Michigan State Agricultural Society:*

DEAR SIR—Enclosed, I send you the report of the proceedings of our Society for the last year. I send you also a statement of the exports of Grand Haven, taken from the "Grand River Times," which shows something of the business transacted in our beautiful valley. Enclosed, I also send you the address delivered by the Rev. E. Prince, before our Society.

Yours, very truly,

HENRY SEYMOUR,

Secretary Kent County A. and H. Society.

GRAND RAPIDS, March 1st, 1854.

LIST OF PREMIUMS,

Awarded at the Fifth Annual Fair of the Kent County Agricultural and Horticultural Society, held in the city of Grand Rapids, October 5th and 6th, 1853:

Best stallion,	J. T. Vantassell,		$3 00
2d "	C. C. Norton,		2 00
Best "	over 2 and under 4 years old,	C. C. Norton,	3 00
2d "	" " " "	John Elison,	2 00

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Best colt 1 and under 2 years, A. Meach,	$2 00
2d " " O. H. Foote,	1 00
Best sucking colt, James Naysmith,	1 00
2d " O. H. Foote,	50
Best brood mare, David Meach,	2 00
2d " O. H. Foote,	1 00
Best span matched horses, R. Edison.	3 00
2d " " S. Wright,	2 00
Best single horse, Asa Meach,	2 00
" span matched colts 2 years old, S. Wright,	2 00
" " yearling colts, C. Neal,	1 00
" colt 2 years old, Charles Ashley,	1 00

The best 2 year old colt, and the best pair yearling colts on the ground, were exhibited by J. B. Hogadone, of Walker, but they were not exhibited until the second day of the Fair, consequently could not draw a premium. The show of horses was very fair, and I think could not be easily surpassed by any county in the State.

Best bull over 2 years old, H. Rhodes,	$3 00
2d " " " A. L. Chubb,	2 00
Best yearling bull, Porter Reed,	1 00
" heifer 1 year old, A. L. Chubb,	1 00
" " calf, Osmond Reed,	1 00
" bull calf, A. L. Chubb,	1 00
" Devon cow, D. W. Watson,	2 00
" Native bull, A. Loomis,	2 00
" yoke of oxen, Charles Hurd,	3 00
" " steers 2 years old, F. Chitenden,	2 00
" Native cow, A. L. Chubb,	1 00
" grade bull, "	3 00
" bull calf, O. H. Foote,	1 00
" heifer calf, "	1 00
" Merino buck, Aaron Brewer,	2 00
2d " Abijah Luce,	1 00
Best Saxon buck, O. H. Foote,	2 00
" Leicestershire buck, S. R. Beals,	2 00
" pen Merino lambs, Aaron Brewer,	1 00
" " ewes, "	2 00

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Best pen Saxon ewes, O. H. Foote, ... $2 00
" " lambs, " 1 00
" boar, W. Birdsall, ... 1 00
" coop Shanghai fowls, H. Holt, ... 2 00
" " Cochin China fowls, J. W. Sligh, ... 2 00
" Poland ducks, Dr. A. Platt, ... 50
" breeding sow and litter of pigs, entered the second day by E. Reed.
Best lumber wagon, G. C. & J. G. Fitch, ... 2 00
2d " Sebra Rathbun, ... 1 00

The wagon exhibited by Messrs. Cook & Baxter was well worthy of public notice; the judges remarked that the three wagons exhibited, were the best they ever saw in any place.

Best wagon hubbs, L. R. Atwater, ... 50
Best family carriage, G. C. & J. O. Fitch, ... 3 00
Best lot of carpenter's tools, W. S. Gunn, ... 2 00
" " cooper's " " " 1 00

A grubbing-hoe and bush-hook, exhibited by W. S. Gunn, were worthy of public notice.

Best rifle, S. & G. R. Pierce, ... 1 00
Best lot of tin ware, Foster & Parry, ... 1 00
Best model for bridge, Ives & Luce, ... 2 00
Best sample of brick, Seymour & Baldwin, ... 50
Best friction matches, C. C. Roberts, ... 25
Best beets, James Ewing, ... 25
Best cabbage, S. Wright, ... 25
Best onions, Ezra Reed, ... 25
Best potatoes, N. L. Avery, ... 25
Best seed wheat, C. P. Schermerhorn, ... 25

A beautiful specimen of spring wheat was exhibited by Mr. Sligh.

Best pumpkins, O. Van Buren, ... 25
Best squash, N. L. Avery, ... 25
Best seed corn, D. S. Wooster, ... 50
Best grapes, H. B. Smith, ... 50
Best quinces, W. G. Henry, ... 50
2d " Hiram Rhodes, ... 25

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Best peaches, W. O. Houghtaling,	$ 50
2d " S. Wright,	25
Best and greatest variety of apples, H. Rhodes.	50
Best winter apples, W. O. Houghtaling,	50
2d " H. B. Smith,	25
Best fall apples, D. S. Wooster,	50
2d " Thales Dean,	25
Best pears, Hiram Rhodes,	25
Best celery, Joseph Escott,	25
Best vegetable eggs, S. P. Barker,	25
Best carrots, Joseph Escott,	25
The only cabinet ware exhibited was by Messrs. Powers & Ball; the articles were beautiful, and attracted much attention; the Judges awarded on the whole	3 00
Best panel door, Treadwell & Symes,	1 00
Best specimen stucco plaster, E. B. Morgan & Co.,	50
Best side of upper leather, W. Hatch & Co.,	50
" " sole " " "	50
Best calf shoes, " "	50
Best 10 yards flannel, Justice Rogers,	50
Best patch-work quilt, Mrs. A. H. Hills,	50
Best fancy bed-spread, Mrs. J. F. Chubb,	50
Best 10 yards rag carpet, Mrs. J. Colton,	50
Best pair wool stockings, Mrs. H. Seymour,	25
Best pair cotton stockings, Miss S. B. Seymour,	50
Best wool socks, John Edison,	25
Best buckskin gloves, Jacob Williams,	50
Best buckskin mittens, D. M. Huff,	50
Best suit ready-made clothes, L. Porter,	1 00
Best 5 lbs. butter, Mrs. John Colton,	50
2d 5 lbs. butter, C. P. Schermerhorn,	25
Best cheese, J. W. Tenney,	50
2d " H. B. Smith,	25
Best 5 lbs. honey, W. J. Blakely,	50
Best maple sugar, Justus Rogers,	50
Best barrel flour, N. R. Rogers,	1 00
2d " Belany & Holmes,	50

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Best specimen baker's bread, W. Fulton & Co., ... $ 50
Best specimen domestic bread, T. Dean, ... 50
Best crackers, W. Fulton & Co., ... 50
Also, a splendid lot of fancy cake was exhibited by Messrs. W. Fulton & Co.
Best plow, G. S. Dean, ... 1 00

The plows exhibited by Messrs. Foster & Parry, though not entitled to premium, being imported, are well worthy the attention of every thorough farmer who wishes a plow of easy draft, to cultivate deep and to fully pulverize the soil. The stoves and other articles exhibited by Messrs. Foster & Parry are worthy of public notice.

Best harrow, Russell Edison, ... $1 00
Best fanning mill, Renwick & Bro., ... 1 50
Best axe, W. S. Gunn, ... 50
Best grubbing machine, Ezra Reed, ... 1 00

The straw cutter exhibited by L. Covell, the Judges highly recommend, and think it worthy of general use; also the horse power and machine exhibited by J. F. Chubb.

Best daguerreotype, L. Buel, ... $1 00
2d best " O. W. Horton, ... 50
Best specimen architectural drafting, J. J. Watson, ... 1 00
Best specimen pencilling, Mary Cummings, ... 50

Best mono-chromatic painting, no numbered; several fine specimens exhibited, but no numbers, and the Judges could not determine the owners. A drawing by a daughter of W. G. Henry, worthy of notice.

Best specimen ornamental needle-work, Mrs. A. Dikeman, ... $0 50
Best specimen worsted needle-work, on ottomans, Mrs. W. B. Renwick, ... 50
Best specimen worsted knitting-work, Mrs. Julius Granger, ... 50
Best floral design, Miss E. E. Pierce, ... 50

Too much credit cannot be awarded to the police, Messrs. Shoemaker, Martindale, Clark, and Grady, for their efficiency in the discharge of their duties during both days of the Fair and during the night of the fifth.

On the afternoon of the second day of the Fair, the Society and a large concourse of citizens listened to an eloquent and instructive ad-

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dress by the Rev. E. PRINCE, of Cascade, after which the following officers were elected for the ensuing year:

A. R. HOAG, President.

HENRY SEYMOUR, Secretary.

VICE PRESIDENTS—H. B. Smith, Vergennes; J. W. Tenney, Walker; Solomon Wright, Alpine; E. F. Strong, Ada; Foster Tucker, Grand Rapids; Benj, Luce, City of Grand Rapids; Charles Hurd, Paris; S. R. Beals, Wyoming; Foster Kelley, Gaines; Jerry Boynton, Byron; W. Wylie, Sparta; Ira Dane, Lowell; Peter D. McNaughton, Caledonia; D. C. McVean, Bowne; H. H. Holt, Cascade; James Dockeray, Cannon; Henry Hall, Plainfield; Sheldon Ashley, Oakfield.

EXECUTIVE COMMITTEE—J. B. Shear, Vergennes; Henry Barkley, Ada; E. Prince, Cascade; Sluman S. Bailey, Paris; Osmond Reed, and O. H. Foote, Grand Rapids; Geo. C. Fitch, City of Grand Rapids.

HENRY SEYMOUR, Secretary.

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EXPORTS OF GRAND HAVEN FOR 1853.

With the kind assistance of gentlemen engaged in the forwarding business, at this place, we have been able to prepare the following statement, which embraces a full list of the most important articles shipped from our port during the year now drawing to a close, together with the amount and value of each, as near as the same can be ascertained:

41,000,000 feet lumber, value,	$328,000
170,000 feet timber,	11,412
33,000,000 shingles,	74,250
13,168,000 pieces lath,	26,336
42,775 pickets,	213
248,125 staves,	2,481
950 cords wood,	1,900
100 cords shingle bolts,	1,000
4,800 tubs,	3,600
3,000 wagon hubs,	750
255 bedsteads,	837
501 ship knees,	2,502
92 grain cradles,	460

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100 bundles rakes,	200
208 " chair stuff, 3 hhds do	1,110
19,336 bbls. flour,	96,680
17,090 bushels wheat,	17,090
6,181 bbls. plaster,	7,730
1,200 bbls. stucco,	4,200
89 tons saleratus,	8,670
72 casks ashes,	1,296
27 tons paper rags,	1,620
509 bales wool,	25,450
787 rolls leather, 3 boxes do	23,910
23 bundles sheep pelts,	330
3 " deer skins,	30
70 packs furs, 2 boxes do	9,500
35 bbls. cranberries,	210
Total,	$651,770
Total value of exports for 1852,	407,332
Increase over last year,	$244,438

These statistics are conclusive of a state of progress and prosperity altogether unparalleled in the history of that region of country, which furnishes from its surplus products the chief items of our commerce. The amount of property which has here sought an outlet to market, during the season of navigation just closed, far exceeds that of any previous year. But quite the most satisfactory feature of all is found in this fact, that the remarkable increase in total valuation for 1853, over that of 1852, is owing no less to enhanced prices abroad for our principal exports, than to the additional amount of the shipments made. Thus, while the resources of the country are being rapidly developed, it finds constantly widening markets, and constantly increasing rewards for the fruits of its productive industry. The consequences of this healthy state of things is everywhere among us fully apparent. The laborer and the capitalist both feel its influence. The latter realizes a lage profit on his investments, and the former, in most instances, is sure of receiving a liberal compensation for his hard toil. With all classes money is easily obtained, and every branch of industry has received a quickening impulse. More extended plans of operation for the future

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are in many instances projected, if not already put in process of execution. Lands are held at advanced rates, but prospects for future emolument, growing out of that species of property, are so fair, that transactions of considerable importance have taken place at present prices. Unusually large quantities, especially of such as are valuable for timber, have been entered within the last twelve months, in this and the counties north, some for the purpose of speculation, and some for the purpose of carrying on lumbering operations.

It will be observed that the value of the various descriptions of lumber sent from this point, including shingles and staves, is more than double that of all other items in the aggregate. Farther north, the people are almost entirely engaged in procuring supplies for the lumber market; but we have no figures at hand that will show the precise amount of their exports for the year. The amount of sawed lumber turned out from Muskegon alone, has been set down at 38,000,000 ft., and we may safely estimate that exported from Ottawa, and the two counties attached thereto, as high as 120,000,000 feet, worth at the place of shipment over $900,000. Lath, shingles, timber and posts, great amounts of which have been shipped, are not embraced in this computation, as we are not furnished with sufficient data, on which to base a judgment in reference to these articles.

The lumber trade has certainly much to do with the prosperity of Western Michigan. It gives employment to crowds of men, creates a demand for agricultural products, and almost entirely sustains the commerce that now exists on the adjacent waters. Already important, it gives promise of continuing to be the absorbing interest of our citizens, even on a more enlarged scale, for many years to come. So long as the forests hold out, we may safely predict that business transactions in this portion of the State, will be characterized for their great activity, quick returns, and handsome cash profits. Numerous railroads in process of construction on the other side, are fast extending the area of the market, and a rapid growth of population is there creating wants that will soon be altogether beyond the present means of supply. Notwithstanding the vast yield from the pineries, the lumber yards of Chicago were never before so thoroughly cleared at the same season of the year, and never before were the prospects for an increased demand so flattering as at the present time.

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With these facts before us, we are confident that the business of our county will soon be pushed with renewed vigor, for we may look forward to the next season, as being one that will call for the greatest activity in every pursuit, and one that will crown with success every reasonable undertaking.

ADDRESS

DELIVERED BEFORE THE KENT COUNTY AGRICULTURAL AND HORTICULTURAL SOCIETY.

BY REV. E. PRINCE.

Gentlemen and Ladies of the Kent County A. & H. Society:

By the request of your Executive Committee, I appear to address you, on this your fifth anniversary.

I do not occupy your time in making apologies, as is too often the case, on such and similar occasions, but cheerfully proceed to my task.

When we read of the great agricultural exhibitions of Europe, and the old settled parts of our own country, consider their wealth and age, we can but esteem ourselves, as a small and very delicate scion, cut off, we scarcely know from what, and but just grafted into that stock, which we believe, is destined, with the rapidity almost of the prophet's gourd, to grow and flourish, until every valley and hill from this to the Pacific, is cultivated like a garden. Though a tender scion, we may, if we will, receive all that nourishment or knowledge, which is the result of long and deep research, proved by mathematical demonstrations and experiments, and thus arrive, in a short period, to that state of comfort and high moral and intellectual elevation, that has been the labor of centuries to perfect. Though much has been done, the field for improvement is yet open wide before us, and it is for us to say whether we will proceed, stand still, or retrograde. The specimens now before us, of the products of the soil, our stock, our implements of agriculture, the mechanical arts, the handy and tasty needlework and fine paintings of our ladies, their beautiful butter and cheese, the interest they manifest on this occasion, above all as exhibited in their smiling faces, cheer us on and say go forward.

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In the progress of my address, I shall endeavor to present such topics, as in my judgment, are best calculated to promote the general thrift and comfort of our Society, which I humbly hope will not only be calculated to promote our happiness and thrift, but that of those with whom we daily mingle. So far as happiness and thrift are concerned we wish to be no respecter of persons.

It is estimated that not far from three-fourths of all the capital and labor in the United States, are employed directly or indirectly in cultivating the soil, and yet there is no field of enterprise which offers more permanent inducement, or calls louder for more help to cultivate. Perhaps there is no county in this western country of the same age, where more talent, enterprise and capital, have been displayed, than in this. We have all the material, which if rightly improved, will soon exalt us far above many, who now consider us as out of the world, or as beings of an inferior race, situated on some isolated fragment of the very fag end of creation.

One of the things which has greatly retarded our growth, from the first settlement of our county, and does now, and will in all coming time, unless abandoned, is the credit system.

This system is considered by many as indispensable, as one of the greatest conveniences ever introduced into business transactions. If all things were valuable according to their cost, then, certainly, it would rank high on the list of valuables. Nothing but intemperance, I am well persuaded, was so extensively practiced with so little profit. When property is purchased on a credit, more is given for it, and a higher per centage on the purchase money is exacted, the foundation laid for contingent charges, litigation and bankruptcy. We admit, there may be cases where a short credit may be expedient, but it should ever be considered as a debt of honor, which, if not paid at the time, or a perfectly honorable and satisfactory arrangement made, all confidence is destroyed in the debtor. But so little confidence is there to be placed in men, that no one, who sells on the credit system, but what, for a general rule, to cover all contingencies, adds to the value of his goods twenty-five per cent. This is not only applicable to merchants, but to all classes, from the Yankee pin-pedler, up to the lordly land speculator, or wherever the credit system is practiced.

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Perhaps there is nothing, in which this is more clearly delineated than in the annual tax sales, one of which, within the last few days, has been attended in this City. In the Enquirer, whose columns contain the list of lands for sale, you may count, for the year 1852, one thousand and forty-two descriptions, with opposite of each, a charge of seventy cents. It will not vary far from this; I only counted one column as the data. Granting this to be correct; the sum total of charges on the one thousand and forty-two descriptions, is $728.70. This is independent of the interest, which, I presume, will amount to thirty-three per cent more than the charges. I only took one township and found this to be the result. Calling this an average and multiply it by twenty, the number of years since the first tax was levied in the County, and it will amount to $14,574. This sum, at ten per cent compound interest in twenty years, would amount to $77,339. This, let it be distinctly understood, will be the sum, when the amount of each year has been on interest twenty years; that is, calling this year the same as twenty years hence, equal to the one twenty years past. We have then before us, on the simple item of tax sales, in the little County of Kent, the sum of $77,339, as the result of the credit system or not paying when it is due, in the short period of twenty years. This $77,339, would be more than three times our quota assigned for the Ottawa and Oakland Railroad. At $1,000 per mile it would build a fraction over 77 miles of plank road. This distance, would at least, bring us out into the suburbs of creation, or as our neighbors would have it, civilization—or it would pay at $20 per month, for 322 years and three months labor, in cultivating the soil. At $10 per acre, it would clear and fence 7,733 acres of land. At 20 cents per tree, it would set our 386,695 trees; this number of fruit and ornamental shade trees, added to the present number scattered through our County, would write the stamp of thrift in capitals of gold upon every corner of our streets or wherever the eye glanced.

This $77,339, it should be remembered, after the expiration of 20 years, will be the annual amount, without adding the yearly interest. Add this, and centuries will scarce be numbered before the sum, at compound interest, would purchase the world.

But some may say, this money has gone into the public treasury, and been paid out for the support of public officers, and thus lightened our tax. We grant this, but it has only paid the charges of its own

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creating. All the labor it has made might have been appropriated to the cultivation of the soil. It may be said too, that it has come out of non-residents, or land speculators. All this may be, yet it does not alter the case—it is the natural consequence of neglecting to pay when a debt is due. Do any suppose that there is no speculating spirit in Kent county? That none of her inhabitants are supporters of the credit system? Let the books of the mechanics, the huge folios of the merchants, the records of the courts, and the black briefs of the lawyers, where, in their own classic native tongue, they have depicted the character consequent on the credit system. Let all these be opened and presented before you, and your mouths would be open to exclaim—the charges on the tax list for delinquency, are but a small moiety compared to these.

For our greatest prosperity, thrift and peace in natural enjoyments, the credit system must be abandoned. That time and money which is lavished to support it, must be converted to the cultivation of the soil and mechanic arts. We must learn to practice on the old couplet of Franklin:

"A penny saved is two pence clear,
A pin a day, a groat a year"

Another thing intimately connected with our highest prosperity, is, we agriculturists must cease to be robbers.

Little did you think that your honorable Executive Committee would request a man to address you on this occasion, so recreant to all former usages, as to lump us all off in round numbers, robbers.

But every one has a right to give a definition to his own words. Robber, in law, according to Blackstone, is one that takes goods or money from the person of another, by force or menaces, and with a felonious intent. Blackstone was a lawyer, and his definition was well adapted to his profession. I am a farmer, and will give my definition, and leave it with you to decide whether it is not as well adapted to farming, as Blackstone's to the law. Robber, then, I define, one who takes from the soil and returns no adequate equivalent. With this definition, the agriculturists of Kent County will, it is believed, on a moment's reflection, excuse my impoliteness, and stand convicted of robbery, by their own consciences.

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Infinite Wisdom has so created the earth, that it requires that which it produces, or its equivalent, to feed it, that it may produce again. This is a *law* of Nature. Hence, wherever this *law* is violated by withholding from the earth its equivalent to what it produces, just in the same proportion she is weakened and rendered less productive. The most stately and thrifty forests, are where the foliage falls upon the roots; this decomposes and feeds them, that the parent tree may flourish and produce again. Where the foliage is destroyed by fire or any other cause, the soil becomes more and more sterile, in the proportion that vegetation is removed, till it is made a perfect barren. If man would let the forests alone, God has so ordered, that it would forever sustain itself—but in the changes, indispensable to agriculture, it is different.

We cannot return the same weight in nourishment that we take from the soil; there must, in the very nature of the case, in all the various changes, which a crop, taken from the soil must undergo before it is prepared to be returned, be a great loss. For this contingency, there is, it is believed, ample provision made, by the wise Ruler of all things. Wherever the climate, soil and water invite the husbandman to come, there is, it is believed, placed within his reach, ample substitutes for all the waste attending cultivation, which, if properly applied, will not only enable him to keep the earth as good as he found it, but if necessary, greatly enrich it. This substitute, is not in all places the same, or alike easily obtained. It consists, as furnished in a state of Nature, principally of peat, lime and plaster, or gypsum, and where these are not, He who feeds the young ravens when they cry, can cause the birds of the air to flutter over, and drive the ocean to manufacture guano, so as to leave man without excuse for not making the earth richer and richer.

In this County we have the three former in great abundance. We have no excuse for exhausting our lands; experience, tested well by experiment in the old improved sections of our country, proves that even plaster alone, properly applied to the grasses, has raised some of the lightest soils, which had been abandoned for years, as barren, to produce bountiful crops. In this County, then, where we have such an abundance of plaster, we have no excuse for letting our lands run down, but on the contrary, every encouragement to make them more and more productive. If we exhaust our land at this early history of our Coun-

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ty, it will be like the recruiting of a poor jaded animal at the commencement of winter, cost more than it is worth. Keep, then, as the wise husbandman would his herds around him, fat and thriving, and He who sends the rain and the sunshine, will richly reward the labor of our hands; but neglect is ruinous.

I see in the June number of the Genesee Farmer, that an intelligent wheat-grower in Wisconsin, writes to the agricultural department of the Patent Office at Washington, that lands which have only been cultivated twelve years in that new State, now yield but half the annual harvest they did when first tilled. An extensive corn-grower in the State of Indiana, writes that "the rich river bottoms of that State now yield but thirty-five bushels per acre, which once produced with an equal amount of tillage, seventy bushels." These, agriculturists, are startling facts, and show a gross mismanagement in the cultivation of the soil, and should serve as beacons to warn us against similar results. It is not enough that we make a little spot, the garden, productive—but it must be the fields; the ten, twenty, thirty and forty acre lots, that will produce an average yield of from thirty to forty bushels per acre of the very finest of wheat. Then it will be, that we shall be prepared to test the power of steam, not only upon our rivers, but our railroads, in heavy loading, and distributing our products all over the world, as the best of all countries. First premium at the World's Fair, will be stamped with Kent County Agricultural Society's gold stamp upon every barrel, every cask, every box, and every sack, containing the products of the county. And best too, with the same stamp, will be written on every implement and article displaying mechanical skill and workmanship. Our abundant water-power—our salubrious climate—our timber—our soil—our plaster—our everything that is rich and beautiful in Nature, all unite, to invite talent, enterprise, ingenuity, learning and capital to this county.

Another thing, for our highest prosperity, is the improvement of our stock.

There never has been a period in the history of the world, when there was such a perfect mania about the improvement of cattle, horses, sheep, and fowls, in some parts of the couutry, as the present. We need scarce except Jacob's enterprise and ingenuity in resorting to peeling the limbs of green poplar, hazel and chesnut trees to improve his stock above Laban's.

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In the last number of the Wool Grower and Stock Register, there is an account of an auction sale of pure blood short horn and other stock, belonging to the Northern Kentucky Importing Society, at the farm of Brutus Clay, in Bourbon County, on the 18th of last August. The purchasers were under proper bonds not to remove the stock from the State for one year. A selfish and narrow contracted act, but it shows that after all has been said about them, they are nearly as anxious to improve the blood of their cattle as their negroes.

In this sale there were ten bulls, from one to three years old, which cost in England, the present season, from $275 to $630 each, and sold at auction from $1,000 to $6,000 each—none less than $1,000 and none over $6,000.

There were at the same time, fifteen cows and heifers, from one to six years old, and cost in England from $225 to $775 each, and sold from $805 to $3,050 each.

Twelve sheep sold from $52 to $775 each; one horse cost in England $1,000, sold for $2,800. There is no mention of Cochin China or Shanghai fowls; if there had been, is it not safe to conclude, that in the height of this humbug fever, they would have out-sold everything else, even the $6,000 animal? When this humbug fever is at its melting height, it is probable all the brains run together; hence, a rooster is just as likely to bring $6,000 as a bull or a horse. When the fit comes on, they must have something that is brought a great distance, and costs a great sum of money.

Now, for us in this new County to attempt to improve our stock, by paying such prices, would be madness and folly in the extreme. If it is improved, it must be by some different method. Will we sit down in despair, because not one of us has six thousand dollars to pay even for one animal of the best blooded stock. Will we say, we will have no improvement, if we cannot reach the maximum of a Kentuckian at a single step. No, there is no such blood in the veins of the stock growers of Kent County. But their motto is, cannot, never accomplished any thing; will try, has done wonders. Here we, as agriculturists, plant ourselves; that we will not be surpassed by Kentucky, or any of the Eastern States, or by old England herself. If we have fixed upon our object, the next thing is, to look for materials to accomplish it.

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The stock that we have, for the most part, is classed as Native; meaning by this, that they are natives of this country; carrying the idea that the stock from which they descended, was not imported, but found here when the country was first discovered. This is incorrect; for the stock from which the so-called Natives was originally imported, come from the same country that the $6,000 stock did, which was sold last August in Kentucky. This every school-boy knows, or should, *especially* if he be a farmer's son. Previous to 1609, cattle and horses had been imported from England into Virginia. This year there were three ships from England loaded with emigrants, horses, sheep, goats, swine, and five hundred domestic fowls, landed at Jamestown, Virginia. The cattle were brought not to slaugter, but to breed from; for the next year after, there was an edict issued, prohibiting the killing of domestic animals of any kind, on penalty of death.

The first cattle introduced into Massachusetts were imported from England in 1624—the first into the State of New York, were from Holland, in 1625.

Now the reasonable inference is, that those who introduced these cattle, at this early period, selected as good as the circumstances of the case would allow. Just as we have done in coming from the older settled parts of the country to this place. Anything choice, whether for the garden or field, whether of stock or implements of agriculture, if we brought *any*, we selected the best in our reach. But, after the lapse of more than two centuries, we read of the rearing in England of Short Horns, Devons, Durhams, Herefords, Ayrshires, Gallaways, and a host of others, and here in this country, we *read only* of *Natives.*

Now if they were originally the same, as every intelligent, consistent man will allow, what has made the difference, that an animal brought from there, will sell for $6000, and one reared here, not over 30 or 60 dollars? One of two things must answer the question. The climate does not agree with them, or they have retrograded, through the neglect of their owners. If the former, then it will be childish folly to attempt it again. The best imported blood will soon become our scrawny, lean, $30 Natives. If the latter be the cause, what proof have we that we shall do better in the future than in the past? There is hope that we will, and since it is obvious that our poor breed of cattle, horses, sheep, and swine, (we do not except fowls,) are thus, in con-

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sequence of our negligence, then the course marked out for us is clear. Where a thing is lost, there the place is to find it. We must then, if we have any regard for our own worldly gains, any for a laudable name at home or abroad, improve our stock. This can be done. I might deliver a long lecture in telling how, but this is not the occasion. I only say, if we will take the right course, before a quarter of a century has passed away, when the humbug fever is at its raging height, as it undoubtedly will be, once in ten or twelve years, until the Yankee blood is all exterminated from the land, our children will sell the Kent cattle, sheep and hogs, far above the English Ayrshires or Short Horns. The whole secret is told in a few words—select the best for the best purposes—take good care and keep no more than you liberally feed.

The last thing I mention for our prosperity, is education. An opinion is too prevalent, that farmers and mechanics want but little more education, than simply to read and write. This is erroneous; there is no class that would enjoy literature better than they. When we are in all our agricultural and mechanical pursuits, daily using implements, that lessen our labor and facilitates our business, it must be interesting to know the chain of causes and incidents that have suggested, completed and presented them at our hands.

Mechanical science and arts have, and are now doing more for the advancement of agriculture and the mechanical arts, than all other things combined. Accident may discover, ingenuity suggest, but it is mathematics, chemistry, geology, and other departments of natural science, that have invented the countless number of labor-saving machines to thresh our grain, to convert it into flour and bread; our wool into cloth, (and if the sewing machine succeeds,) into garments; our forests into lumber, and an endless variety of implements of agriculture and the mechanical arts.

It is science that has compassed the earth, tunneled her rivers and her mountains, traversed her seas, her oceans, and her continents, laden with her rich products, independent of the winds of Heaven or the muscle of the horse. It is this that has tamed the lightning of Heaven, and rendered safe our dwellings amid her storms, and sent thought with electric rapidity from pole to pole. Shall we farmers and mechanics, have no aspirations after such knowledge? We, by whose labors all these improvements are supported, and not sip, even at the lit-

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tle rills of science? Let no such thoughts ever be harbored in the cabins, the fields or the work-shops of Kent County, or wander through her new streets. That farmer or mechanic, who is not first to encourage our schools, our academies, our colleges, our seminaries of learning, must be blind to his own highest interest, or of the niggardly class of misers, of whom Pope says—

"No silver saints, by dying misers given."

He clings to his sordid dust to the very last. Lives through a long life, and every moment of it, whether asleep or awake, his labor made less, and his soil more productive by education, and do nothing to support it! No! We, the members of this Society, spurn such sentiments from our bosoms, as we would coiled double-fanged adders. We will support schools, we will have around us books and newspapers, and not only keep up, but take the lead in the improvements of the age. The fop and the dandy, together with all who despise us or our occupation, we will pity and support as we ever have done, through the labor of our hands. They are at least, as profitable as distilleries, though they may not consume quite so much surplus grain—yet in their own estimation, they fill a mighty space, and stand for our admonition, a sample of the folly of men.

Around our frugal boards, shall be discussed the modus operandi of things past, present and future. We will improve on the past and eagerly seize every new suggestion for the improvement of the future, so that when we, who are the founders of this Society, shall have crumbled into dust, and far less than two centuries in the future, that throng of dense teeming myriads huddled together between the two Seas, shall have made far greater improvements than have been made in the last two centuries. There will then be no contention between the Yankee, Dutch, crying baby, shop-keeper, and the tardy merchant, with his millions, about going to New York and back in six or seven days. Railroads will be laid aside as too slow for the age, and air vessels loaded with passengers and the products of our soil, will traverse the skies, propelled with the velocity of thought, by J. B. Lindsay's electric battery, or some other bold genius to carry out his suggestions. The greatest trouble will be in getting out and in these air vessels, but this difficulty in a great measure, will have been obviated by the effect of the Maine law. That generation will be bold, daring, searching in intellect, quick of

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comprehension—their bodies athletic, the generation long before them having had all their weaknesses and impurities, consequent on intemperance, entirely *eradicated.* Then the credit system will only be known on the historic page, as the folly of the age two hundred years ago, or, as *we now* look upon the acts of the Pilgrims in believing in hanging for witchcraft. The soil, now robbed of all her productiveness, through the short-sightedness and laziness of man, will then be deep ploughed, turning under a heavy luxuriance, that it may produce abundantly again. The curious inquisitive genius will read over the proceedings of this anniversary, the premiums awarded, the noted size of vegetables, remarks on the mechanical arts, the tasty work of the ladies, and say surely, that was in the dark ages, before the introduction of improvements. Ah! he may turn over another leaf, or chance to find amid the rubbish of some old library, a folio of newspapers, dated Grand Rapids, Kent County, Michigan, 1853. There, his eye may catch upon something that will tell that the foundation of all their greatness, may be traced back two hundred years to the little beginnings of the Kent County Agricultural and Horticultural Society.

With these suggestions, as we scatter from these consecrated grounds, to our farms and our shops, may we go with a fixed resolution, that this year shall be distinguished far above any preceding, for all the improvements connected with the greatest prosperity of the Society—may our lives and healths be continued, and our *works* when we shall assemble on these grounds to exhibit another year, prove that we have answered the highest expectations. But stop! this cannot be; that all will be here even in the short span of one year. The Hon. Henry R. Williams,* one of our number, whose deep foot-steps may be traced in almost every enterprise and improvement in our County, and all this Valley, is gone! Is it weakness, to pause and drop a tear, in imagination over yon distant grave, of one whose memory we cherish with respect, and trust that when we are, in various ways, reaping the fruits of his enterprise, we shall be prepared to follow in quick succession, to make room for the teeming myriads that are pressing on to fill our places.

*Mr. Williams died in Buffalo, N. Y.

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LAPEER COUNTY.

STATISTICS OF LAPEER COUNTY FOR THE YEAR 1853.

Number of saw mills, (water)	26
" " (steam)	15
" flouring,	8
" tanneries,	5
" wool factories,	2
Feet of lumber sawed,	25,000,000
Feet of lumber logs run,	12,000,000
Shingles manufactured,	150,000,000
Bushels of wheat raised,	254,493
" corn raised,	112,575
" oats raised,	104,925
" barley raised,	1,296
" rye raised,	4,200
" buck wheat raised,	15,696
" potatoes raised,	45,628
clover seed raised,	192
Pounds of wool,	99,807
" butter,	504,000
" cheese,	59,139
" maple sugar,	60,563
Tons of hay,	7,849
Number of sheep,	40,155
" swine,	9,435
" horses,	2,574
" neat cattle,	12,819

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Barrels of flour manufactured,	12,680
Acres of improved land,	104,769
Value of furs and pelts,	$7,500
Total value of products as far as ascertained, is	$692,940

In the above table we have omitted the articles of beef, pork, leather, manufactured woolen, and many other articles, the amount of which we were unable to obtain, but which would make a large item.

The aggregate valuation of products is greatly below what it would have been, had there been facilities for getting to market. A railroad communication through this county, would doubtless increase the value of products twenty-five per cent. The quality of pine is excellent, the timber being very large and soft. There is also a vast amount of oak, ash, maple, and other valuable timber. The oak is of fine quality for ship building, and staves. After the land is cleared, the soil is unsurpassed for agricultural purposes. The grain crops are very abundant, and of the best quality. We have seen as good wheat grown here as we have ever found in any county; but most of it, we regret to say, is exported in the berry, for want of capital, and mills to manufacture it. This ought not to be, and we hope before another year to be able to report differently. This county is very fine for grazing; cattle and sheep do remarkably well; of the latter there has been a great increase during the past two or three years, and much attention is paid to the grades of the sheep.

All we now want is capital, and roads to get our products to market, and then Lapeer will rank among the wealthy counties of the State.

LAPEER VILLAGE.

This village, the county seat of Lapeer county, is situated on the north side of the south branch of the Flint River, thirty miles directly north of Pontiac. The location of the village is high, and healthy. At present the population is about one thousand. The village has a large trade from the surrounding country, which is rapidly increasing. There are 10 stores, 2 drug stores, 1 jeweler, 5 shoe shops, 3 tailor shops, 2 copper and tin shops, 1 foundery, 2 cabinet shops, 4 wagon shops, 5 blacksmith shops, 1 cooper shop, 1 gunsmith shop, 3 tanneries, 1 saddle and harness shop, 1 saw mill, 1 flouring mill, 1 sash factory, 20 carpenters and joiners, 2 churches, 2 district schools, 1 high school, 1 court house, 3 hotels, 4 doctors, 5 lawyers, 4 clergymen.

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Of the amount of mechanical labor performed, or of goods, it is difficult to form an estimate, but we can say our merchants and mechanics are all doing well, and have all the business they want.

The village is growing fast; a large number of buildings were put up last year, and active preparations are being made for building during the present season.

We have strong hopes that the railroad will be built from Port Huron to this place during the present year, and if so, our village will at once assume that position of importance which it must eventually have in Northern Michigan.

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REPORT

OF THE LIVINGSTON COUNTY AGRICULTURAL SOCIETY.

HOWELL, December 15, 1853.

J. C. HOLMES, Esq., *Secretary Michigan State Agricultural Society:*

SIR—I have the honor herewith to transmit a report of the organization of the Livingston County Agricultural Society, with a brief abstract of its transactions for the year 1853.

The Society was organized at Howell, on the 24th day of February last, at a public meeting convened for that purpose, and a Constitution adopted.

Agreeable to article third, officers were duly elected for the year 1853.

The first meeting of the Board of Directors, was held at the village of Howell, on the 12th day of March, 1853, at which time by-laws were adopted.

The Board also adopted a resolution to the effect that the first Fair of the Society would be held at the village or township of the county, the citizens of which would contribute the largest amount of means toward defraying the incidental expenses of the said Fair—and, under that resolution, at a subsequent meeting, it was determined to hold the first Fair at the village of Brighton on the 6th and 7th days of October, the citizens of that place having pledged to the Society the sum of $140 towards defraying the expenses of the same.

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On the 15th of June, at a meeting of the Board, the following premium list was adopted, and judges appointed.

On the 5th of September, at a meeting of the Board, Wm. R. Cobb Esq., of Brighton, was appointed Marshal, and directed to prepare the Fair ground, enclose the same with a suitable fence, and erect the necessary pens, sheds &c., for the accommodation of animals, and safe keeping of all articles presented for exhibition.

Rules and regulations were adopted.

On the 6th and 7th of October, the first Fair of the Society, was held in the village of Brighton, and was successful beyond the most sanguine expectations of its warmest friends.

The weather was favorable, and the attendance of people very large, probably not less than 4,000 being present. Upwards of three hundred entries were made in the different classes in which premiums were offered. The exhibition of horses and sheep was the most extensive in the classes of live stock; but that of working oxen and swine was very fair.

In the class of sheep there were 50 entries, some of them very superior animals. The full blood French Merinos, full blood Spanish, and various crosses of the two, as well as South Downs and Leicesters, were all represented. Probably there are few better bucks in the State, than those exhibited by R. Y. Browning, Esq., S. W. Twitchell, Esq., and Messrs. Bingham & Olds.

The exhibition of fruit, especially apples, peaches, and pears, was very fine.

The Annual Address was delivered by Hon. Geo. W. Peck. It was a beautiful, truthful, and most eloquent portrayal of the true dignity and importance of the farmer's calling, and was listened to with deep attention by the assembled multitude. It was mainly an extempore address, and no copy has been obtained for publication.

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The following gentlemen were elected officers of the Society, for the year 1854:

President—IRA JENNINGS.

Vice Presidents—L. Judson, Brighton.
John Bush, Conway.
John Sellers, Deerfield,
A. W. Olds, Green Oak.
James M. Murray, Genoa.
C. L. Crouse, Hartland.
C. Handy, Handy.
Geo. Galloway, Hamburg.
J. H. Galloway, Howell.
Daniel Pierson, Iosco.
E. N. Fairchild, Marion.
J. B. Rumsey, Osceola.
Jocob Sigler, Putnam.
John C. Salsbury, Tyrone.
Alva Preston, Tuscola.
Wm. H. Dunn, Unadilla.

Treasurer—Ely Barnard.

Secretary—N. G. Isbell.

Directors—J. R. Goodrich,
E. F. Burt,
Austin Wakeman,
J. L. Smith,
James M. Murray.

In conclusion, I have only to add, that the Board of Directors have concluded to make the effort to sustain this Society, wholly by the sale of membership tickets and voluntary contributions, and to that end they made no report to the Board of Supervisors, with a view to obtain funds from the County Treasury, as contemplated by law.

I am, sir, very respectfully, your obedient servant,

E. F. BURT,
Sec'y Livingston Co. Agricultural Society.

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OFFICERS.

President—IRA JENNINGS, of Green Oak.
Vice Presidents—Royal C. Rumsey—of Green Oak.
Stoddard W. Twitchel—of Hamburg.
Freeman Webb, Jr.—of Putnam.
V. R. T. Angel—of Unadilla.
Daniel Pierson—of Iosco.
Ezra N. Fairchild—of Marion.
Ely Barnand—of Genoa.
Job Cranson—of Brighton.
Chauncey L. Crouse—of Hartland.
Joel B. Rumsey—of Osceola.
O. J. Smith—of Howell.
Marvin Gaston—of Handy.
David Bush—of Conway.
Jacob Kanouse—of Tuscola.
Lorenzo Boutell—of Deerfield.
John C. Salsbury—of Tyrone.
Treasurer—Wm. A. Buckland.
Secretary—E. F. Burt.
Board of Directors—Ira Jennings—President.
James M. Murray,
John How,
E. J. Hardy,
N. G. Isbell,
A. W. Olds,
E. F. Burt—Secretary.

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CONSTITUTION.

ARTICLE 1. This Society shall be called The Livingston County Agricultural Society, auxiliary to the "Michigan State Agricultural Society," and the same is organized and established for the encouragement and advancement of agriculture, manufactures and the mechanic arts.

ART. 2. Any person may become a member of the Society by signing the Constitution, and paying one dollar into the Treasury—and may continue a member by paying annually thereafter the sum of fifty

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cents. Life memberships may be obtained on payment of the sum of ten dollars, and all certificates of membership shall include the family of the person to whom they are given. The officers elected upon the organization of the Society, shall be considered members for one year.

ART. 3. The officers of the Society shall consist of a President, sixteen Vice Presidents, one in each towhship in the county, a Treasurer, a Secretary, and a committee of five persons, who, together with the President and Secretary, shall constitute a Board of Directors of the Society, all to be elected by ballot, except at the first election, and to hold their offices for one year, and until others are chosen.

ART. 4. The duties of the officers shall be such as usually pertain to such offices, and as shall be prescribed by this Constitution, and by the By-Laws of the Society.

ART. 5. The annual meeting of the Society, for the election of officers and transaction of other necessary business, shall be held on the last Thursday in February, unless otherwise determined by the Board of Directors, and at such place as said Board shall appoint—they giving suitable notice thereof, and special meetings may be held upon the call of said Board.

ART. 6. The Society shall hold an Annual Fair and General Exhibition of animals, agricultural and horticultural products, articles of domestic manufacture, and of the mechanic arts, and also such other matters as the Board of Directors shall determine; said Board to direct as to the time and place of holding said Fair, and the premiums to be awarded, giving at least ninety days public notice of the same.

ART. 7. No premium shall be given to a person not a member of the Society.

ART. 8. Any vacancy in the offices of the Society, may be temporarily filled by the Board of Directors.

ART. 9. It shall be the duty of the Board of Directors to adopt a code of By-Laws, and publish the same with the Constitution, for the benefit of the Society—and this Constitution and said By-Laws may be altered or amended at any regular meeting of the Society, by a majority vote of the members present.

ART. 10. It shall be the duty of the several officers to obtain the names of persons wishing to become members of the Society, and to solicit and pay over to the Treasurer all moneys received for memberships and as donations.

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BY-LAWS.

1. The Board of Directors shall provide suitable accommodations for the annual exhibitions, and it shall be their duty annually to appoint a Marshal, whose duty it shall be to cause to be provided suitable pens for the reception of stock offered for premiums—he shall take charge of such pens, and assign each animal and each product to its proper place on days of exhibition—he shall keep a list of such animals, with such other information in relation to each as may be communicated to him by the Secretary, for the inspection of the Viewing Committees. He may appoint necessary assistants, with the same duties, subject to himself.

2. They shall appoint Judges who shall examine the property and specimens produced by the persons applying for premiums, at the annual Fairs, and shall determine whether any or either of the applicants be entitled to a premium according to the conditions prescribed; and they may also appoint Judges to visit and examine such farms as may be entered for premiums, at such times and under such regulations as shall be prescribed by the Board.

3. No article shall be entitled to a premium, but such as actually belong to, and are bona fide, the property of competitors, or such as they have had possession of, and been by them kept within the county for three months next preceding the exhibition. Applicants for premiums shall give in written statements relative to the article exhibited, and shall be prepared to procure satisfactory evidence to sustain them.

4. No member of any Viewing Committee shall, prior to their award, ask or receive from any person on the day of the Fair, information touching animals or products, except from the Marshal or his assistants—nor shall the Marshal or his assistants, prior to such award, communicate to the committee in any case, the names of the owners of such animals or products.

5. The Viewing Committee shall be attended to the pens by the Marshal and his assistants—and any owner of stock or member of the Society, who shall in any way attempt to influence the decisions of the committees, shall forfeit all claims to a premium. Any member who shall refuse to obey the Marshal, when acting within the sphere of his duty, or shall resist him in the execution of his duties, shall be expelled from the Society.

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6. All reports of Viewing Committees shall be in writing, and signed by the members of the committee assenting thereto—and premiums shall be conferred on the award of a majority of any such committee.

7. No premiums shall be awarded without competition, unless the Viewing Committee shall deem the animal or product highly meritorious—nor shall premiums be given in cases where there is competition, unless the Viewing Committee shall deem the said animal or product worthy of the same.

8. No premium shall be delivered but to the person to whom it is awarded, who shall forfeit the same if not present to receive it on the day of exhibition, unless in case of sickness or for other unfavorable occurrences, to be determined by the Board.

9. No animal presented for competition shall be entitled to receive more than one premium annually.

10. No domestic, household or other manufacture presented for competition, shall be entitled to receive more than one premium annually.

11. It shall be the duty of the Viewing Committees to deposit with the Secretary, their awards, and the same shall be preserved in the archieves of the Society.

12. The Board of Directors shall audit the accounts of the Treasurer, and if found correct, shall certify to its submission to the annual meeting of the Society.

13. The Treasurer shall receive and have charge of all the funds of the Society, and shall disburse the same under the direction of the Board, and shall report at each annual meeting.

14. It shall be the duty of the President, upon the application of five members of the Board of Directors, to call a meeting of the same for the dispatch of business.

15. It shall be the duty of the Treasurer to receive and keep all books, pamphlets, papers, &c., designed for the Society, and loan the same to its members, and also to report to the annual meeting, the number of volumes pertaining to the library.

16. No person shall be entitled to vote unless he has complied with the provisions of the Constitution.

17. Premiums may be offered and awarded for such foreign stock and articles as the Board of Directors shall designate, but such premi-

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ums shall be distinct from the premiums awarded for articles and stock owned in the county; and stock and articles owned in the county shall have the right to compete for all such premiums.

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LIST OF PREMIUMS

Of the first Annual Fair of the Livingston County Agricltural Society, to be held at Brighton, on the 6th and 7th days of October, 1853:

CLASS I.—FARM AND FIELD CROPS.

Judges—Geo. Galloway, Hanibal Lee, T. J. Rice.

Best conducted farm,	$3 00
Largest quantity of wheat on one acre,	3 00
Best acre corn,	3 00
Best ¼ acre potatoes,	2 00

CLASS II.—CATTLE.

Judges—Alva Preston, C. L. Crouse, John W. Bottsford.

Best bull two years old or over,	3 00
2d " "	2 00
Best yearling bull,	2 00
2d "	1 00
Best bull calf,	1 00
Best cow 4 years old or over,	2 00
2d " "	1 00
Best 2 year old heifer,	2 00
2d " "	1 00
Best 1 year old heifer,	1 00
2d " "	50
Best heifer calf,	50

CLASS III.—WORKING OXEN.

Judges—P. L. Smith, L. C. Crittenden, L. Boutell.

Best yoke working oxen, 4 years old or over,	3 00
2d " " " "	2 00
3d " " " "	1 00
Best yoke 3 year old steers,	2 00
2d " "	1 00

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Best pair yearling steers,	$2 00
2d " "	1 00
Best fat ox,	2 00
2d "	1 00
Best fat cow,	1 50
2d "	1 00
Best fat steer 3 years old,	1 00
2d " "	50

CLASS IV.—FOREIGN CATTLE.

Judges—H. H. Norton, C. W. Burwell, R. Fowler.

Premiums same as on the best domestic cattle, but no premium is to be awarded on foreign cattle of common blood.

CLASS V.—DRAUGHT HORSES.

Judges—John Sellers, John H. Galloway, L. Judson.

Best stallion 3 years old or over,	$4 00
2d " " "	3 00
Best brood mare, 3 years old or over,	3 00
2d " " "	2 00
Best 2 year old horse colt,	2 00
2d " "	1 00
Best 2 year old mare colt,	2 00
2d " "	1 00
Best yearling horse colt,	1 50
2d " "	1 00
Best yearling mare colt,	1 00
2d " "	75
Best colt not more than 8 months old,	1 00
" pair matched horses,	4 00
2d " "	2 00
Best single horse,	2 00
2d "	1 00

CLASS VI.—FOREIGN HORSES.

Judges—W. C. Shaft, N. J. Hickey, J. R. Goodrich.

Premiums same as on best domestic horses, but no premiums to be awarded on foreign horses without a pedigree.

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CLASS VII.—SHEEP.

Judges—Joseph Jennings, David Kellogg, Joel B. Rumsey.

Best blooded buck,	$1 00
2d "	50
Best pen 5 ewes,	1 00
2d "	50
Best pen 5 buck lambs,	1 00
2d " "	50
Best pen 5 ewe lambs,	1 00
2d " "	50
Best pen five wethers,	1 00
2d " "	50

CLASS VIII.—FOREIGN SHEEP.

Judges—Geo. W. Lee, Royal C. Rumsey, Peter Crosby.

Premiums same as domestic sheep.

CLASS IX.—SWINE.

Judges—Darius Lewis, Chester Goodrich, F. Webb, Jr.

Best boar,	1 00
2d "	50
Best breeding sow,	1 00
2d " "	50
Best lot four pigs, not less than 4 nor more than 10 months old,	1 00
2d "	50

CLASS X.—POULTRY.

Judges—F. J. Lee, J. B. Skilbeck, R. Bigham.

Best pair Shanghai fowls,	1 00
" Cochin China fowls,	1 00
" Dorking fowls,	1 00
" Poland fowls,	1 00
" Native fowls,	50
" Ducks,	50
" Guinea fowls,	50
" Geese,	50
" Pea fowls,	50

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CLASS XI.—FARM IMPLEMENTS.

Judges—O. J. Smith, V. R. T. Angel, L. B. Fonda.

Best farm wagon,	$2	00
" harrow,		50
" corn cultivator,		50
" fanning mill,	1	00
" corn sheller,		50
" straw cutter,		50
" horse rake,		50
" ox yoke,		50
" roller,	1	00
" carriage,	2	00
" harness,	1	00
" churn,		50
" cheese press,		50
" grain cradle,		50
" grass scythe,		50
" threshing machine,	2	00
" grain drill,	1	00
" grain cultivator,	1	00
" plow, for deep plowing,	1	00
2d " " "		50
" plow, for light plowing,	1	00
The most useful improvement, newly invented, for cultivating the farm,	2	00

CLASS XII.—BUTTER AND CHEESE.

Judges—John Bush, W. C. Rumsey, J. B. Lee.

Largest quantity of butter, quality considered, made from one cow, in 30 consecutive days,	2	00
2d " "	1	00
Best 10 pounds butter,	1	00
2d " "		50
Best cheese one year old or over, not less than 15 pounds,	1	00
2d " " " "		50
Best new cheese, 15 pounds or over,	1	00
2d " " "		50

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CLASS XIII.—SUGAR AND HONEY.

Judges—C. Van Keuren, D. Benjamin, D. Sherwood.

Best 5 pounds maple sugar,	$	75
2d " "		50
Best 10 pounds honey,		75
2d " "		50

CLASS XIV.—DOMESTIC MANUFACTURES—FIRST VARIETY.

Judges—H. J. Rumsey, S. M. Case, F. A. Grimes.

Best pair woolen blankets,	1	00
" ten yards flannel,	1	00
" ten yards woolen cloth,	1	00
" ten yards woolen carpet,	1	00
" carpet of other or mixed material,	1	00
" hearth rug,	1	00
" ten yards rag carpet,	1	00
" pair woolen stockings,		50
" " socks,		50
" " mittens,		50
" woolen coverlet,		50
" " shawl,	1	00
" white quilt,	1	00
" quilt of any other color,	1	00
" pound woolen (white) yarn,		50
" " (colored) yarn,		50
" pound worsted yarn,		50
" pair " stockings,	1	00

CLASS XV.—DOMESTIC MANUFACTURES—SECOND VARIETY.

Judges—L. Bishop, John Kenyon, Jr., Joseph Rider, Jr.

Best pair cow hide boots	1	00
" calf boots,	1	00
" men's cow hide shoes,		50
" ladie's slippers,		50
" " calf boots,		50
Best over coat,	1	00
" dress coat,	1	00
" pair pants,		50

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Best vest,	$0 50
" bedstead,	1 00
" sofa,	1 00
" bureau,	1 00
" six chairs,	1 00
" table,	1 00
" rocking chair,	1 00
" set of horse shoes,	50
" lot of horse shoe nails, not less than 1 pound,	50

CLASS XVI.—DOMESTIC MANUFACTURES—THIRD VARIETY.

Judges—P. L. Hendricks, A. F. Albright, John D. Appleton.

Best flour barrel,	50
" pork barrel,	50
" panel door,	1 00
" window sash,	50
" cooking stove,	1 00
" parlor "	1 00
" barrel flour,	1 00

CLASS XVII.—ORNAMENTAL NEEDLEWORK.

Judges—Mrs. D. Hinman, Mrs. Wm. McCauley, Mrs. C. L. Crouse.

CLASS XVIII.—FLOWERS.

Judges—Mrs. Geo. W. Lee, Mrs. W. A. Buckland, Mrs. Jas. B. Lee.

CLASS XIX.—FRUITS AND VEGETABLES.

Judges—A. Younglove, G. Baetkie, E. N. Fairchild.

CLASS XX.—PLOWING MATCH.

Judges—R. P. Bush, R. Crouse, M. Gaston, James Rice, Daniel Boutell.

Best ¼ acre,	$3 00
2d "	2 00

NOTE.—Owing to the limited means of the Society, the Board of Directors have not felt warranted in offering premiums for a specific list of articles in classes 17, 18, and 19, but specimens and contributions are respectfully solicited in all those classes, and premiums will be awarded for meritorious articles, as the means of the Society will warrant.

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RULES AND REGULATIONS

Of the First Annual Fair of the Livingston County Agricultural Society, to be held at Brighton, on Thursday and Friday, the 6th and 7th of October, 1853:

Members of Viewing Committees are requested to report themselves on Thursday the 6th, at nine o'clock A. M., at a meeting of the Board of Directors, to be held at the show grounds, to the end that all vacancies may be filled. It is important that the Committees should be punctual to the hour appointed.

Any person may become a member of the Society by the payment of one dollar, and receive a ticket which will admit himself and family to the exhibition, at all times during the continuance of the show.

Single tickets at 12½ cents, admitting one person, will be for sale at the office near the entrance to the grounds, at all times.

Exhibitors, intending to compete for premiums, must become members of the Society.

Persons wishing to offer their farms for premium, must give notice to one of the Committee on Farms, at least one week before the Fair.

Exhibitors are requested, as far as is convenient, to enter and arrange their articles on Wednesday the 5th, so that they may be in readiness for the examination of the Judges, on the forenoon of the 6th. The Marshal, or his deputies, will be in readiness on the ground, to receive the articles intended for exhibition, and assign for them an appropriate department.

All articles intended for exhibition, must be entered at the business office, at the entrance to the show ground, before entering the enclosure, where cards will be furnished by the Secretary, with the number as entered at the office. Exhibitors will place their cards on or near the articles or animals to be exhibited, so that the Judges will find no difficulty in designating them by the number.

No articles or animals entered for exhibition, can be taken from the ground before the close of the Fair, without permission of a member of the Board of Directors—and any violation of this rule will forfeit all claim to a premium on the article so removed.

INSTRUCTIONS TO JUDGES.

The Judges on animals will have regard to the symmetry, early maturity, size and general characteristics of animals they judge. They

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are to take into consideration the keeping, and show no partiality in favor of over-fed animals.

No person whatever, will be allowed to interfere with the Judges in making their determination.

All persons competing for premiums on field crops, must furnish a written statement of the amount of their products, and the Judges shall require of them satisfactory evidence of the correctness of such statement.

The Judges on plowing will have regard to the time in which the work is accomplished, depth of furrow, and general character for practical purposes of utility in our soils, rather than beauty of appearance.

When there is but one exhibitor, although he may show several articles in a class, only one premium upon the same article or animal will be awarded, and no premium will be awarded when the article or animal is considered unworthy, though there be no competition.

No Viewing Committee shall award discretionary premiums. When, however, discretionary articles of merit are presented, for which no premium is offered, the Judges will refer them to the Board of Directors for their action.

The Judges are desired to make their reports as full as possible, under the circumstances, noticing the peculiar qualities of the articles or animals on which premiums are awarded, and also noticing favorably other competing articles of merit, on which no premiums are awarded.

The Judges are requested to make their report to the Secretary, at the business office, by 11 o'clock A. M., on Friday the 7th.

ORDER OF PROCEEDINGS.

The show will be open for exhibition at 10 o'clock A. M., on Thursday the 6th.

On Friday the 7th, at 9 o'clock A. M., the plowing match will take place, on the most suitable ground to be obtained near the Fair ground.

At 11 o'clock on Friday, the annual election of officers for the Society, will be held on the Fair ground.

At 2 o'clock on Friday, an address will be delivered by the Hon. Geo. W. Peck, immediately after which, the reports of the Viewing Committees will be read.

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LIST OF PREMIUMS

Awarded by the Livingston County Agricultural Society, for the year 1853.

CLASS I.—FARM AND FIELD CROPS.

No.	42.	E. N. Fairchild, ½ bushel of blue-stem seed wheat,	$0 50
"	45.	J. Fishbeck, ½ bushel of white flint seed wheat,	50
"	43.	H. H. Smith, bag of Marion wheat, (a new variety,)	50
"	298.	A. Monroe, specimen of seed corn,	50
"	103.	O. Morse, " " potatoes,	50

The Board of Directors take pleasure in noticing a statement of a crop of corn, made by Morris Bennett, Esq., of Howell, but presented too late for competition.

Mr. Bennett, without manure, or any extra outlay for cultivation, raised from an acre of ground, 110½ bushels of ears, 1½ of which made a bushel of shelled corn. This he considers a fair average of the whole field of ten acres.

CLASS II.—CATTLE.

No.	279.	Wm. Sexton, best bull over 2 years old,	$3 00
"	150.	P. L. Smith, 2d " "	2 00
"	90.	J. B. Hammond, best bull 1 year old,	2 00
"	44.	J. Fishbeck, 2d " "	1 00
"	17.	D. Case, best bull calf,	1 00
"	170.	W. W. Smith, best yearling heifer,	1 00
"	79.	E. Barnard, best cow 4 years old or over,	2 00
"	233.	Rev. Mr. Osborn, 2d " "	1 00

CLASS III.—WORKING OXEN.

No.	230.	J. W. Bottsford, best pair working oxen,	3 00
"	297.	F. Fishbeck, 2d " "	2 00
"	115.	C. P. Bush, 3d " "	1 00

DISCRETIONARY PREMIUMS.

No.	145.	J. Monohan, yoke of oxen,	75
"	46.	C. Sawyer, "	75
"	164.	W. B. Kellogg, "	75
"	61.	D. B. Power, one pair 4 year olds,	75

FAVORABLY NOTICED.

No. 62. D. B. Power, one pair yearling steers.

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CLASS IV.—FOREIGN CATTLE.

No. 2.	C. A. Jeffries, best 2 year old Durham heifer,	$2 00
" 1.	" " yearling bull, (Durham,)	1 00

CLASS V.—DRAUGHT HORSES.

No. 204.	W. C. Shaft, best stallion (Napoleon Bacchus,)	4 00
" 85.	H. G. Love, 2d " (Bay Messenger,)	3 00
" 302.	T. Holloway, best brood mare,	3 00
" 262.	H. H. Norton, 2d "	2 00
" 246.	D. D. Carr, best 2 year old horse colt,	2 00
" 165.	W. E. Thompson, 2d "	1 00
" 171.	D. S. Lee, best mare colt 2 years old,	2 00
" 271.	F. Monroe, 2d " "	1 00
" 52.	Floyd Williams, best yearling horse colt,	1 50
" 125.	Hiram Wing, 2d " "	1 00
" 22.	Thomas Daily, best yearling mare colt,	1 00
" 276.	Name not known, 2d "	75
" 302.	T. Holloway, best sucking colt,	1 00
" 201.	K. S. Bingham, best span of matched horses,	4 00
" 151.	P. L. Smith, 2d " " "	2 00
" 249.	I. P. Bingham, best single horse,	2 00
" 295.	E. Dideamer, 2d "	1 00

DISCRETIONARY PREMIUMS.

No. 257.	Kanouse & Fuller, stallion 4 years old, Young Duroc,	2 00
" 219.	J. R. Goodrich, stallion, Black Hawk, 3 years old,	2 00
" 270.	F. Monroe, span matched colts, 2 years old,	1 50
" 291.	J. Cole, yearling horse colt,	75
" 39.	C. Smith, pair matched yearling mare colts,	1 00
" 235.	G. C. Fuller, colt 5 months old,	75
" 64.	C. Corson, sucking colt,	50
" 112.	A. Tooley, one pair matched 4 year olds,	1 50
" 81.	E. Latson, 2 year old colt,	75
" 165.	W. E. Thompson 2 year old colt,	75

CLASS VI.—FOREIGN HORSES.

No. 296.	Capt. E. P. Thun, one full blood mare, (Fanny Hart,)	2 00
" 302.	Capt. P. E. Thun, pair matched trotting horses,	4 00

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CLASS VII.—SHEEP.

No. 178.	P. Y. Browning, best French buck 1 year old,	$1 00
" 36.	S. W. Twitchel, 2d " " 10 months old,	50
" 58.	J. Cranson, best pen 5 ewes, (Pauler Merinos)	1 00
" 200.	K. S. Bingham, 2d " (Spanish)	50
" 208.	L. C. Crittenden, best 5 buck lambs, (Spanish)	1 00
" 161.	Wm. Brown, 2d " " (Leicester and South Downs,)	50
" 28.	I. & J. F. Jennings, best pen 5 ewe lambs, (Spanish,)	1 00
" 241.	H. Goodrich, 2d " 8 " " " "	50

CLASS VIII.—FOREIGN SHEEP.

The Committee report that no foreign sheep are equal to the domestic, and therefore award no premiums.

DISCRETIONARY PREMIUMS.

No. 196.	Bingham & Olds, French Merino buck,	50

CLASS IX.—SWINE.

No. 250.	R. C. Rumsey, best breeding sow,	1 00
" 23.	C. L. & R. Crouse, 2d "	50
" 33.	L. B. Fonda, best boar,	1 00
" 96.	A. Angell, 2d "	50
" 250.	R. C. Rumsey, best pen 4 pigs,	1 00
" 23.	C. L. & R. Crouse, 2d "	50

DISCRETIONARY PREMIUMS.

No. 38.	L. C. Pratt, sow and 3 pigs,	50

CLASS X.—POULTRY.

No. 136.	J. H. Galloway, 1 pair Shangais,	1 00
" 134.	N. J. Hickey, 1 pair Cochin Chinas,	1 00
" 132.	F. J. Lee, 1 pair Dorkings,	1 00

FAVORABLY NOTICED.

No. 135. N. J. Hickey, 1 pair Chittagongs.

CLASS XI.—FARM IMPLEMENTS.

No. 159.	D. Kellogg, best lumber wagon,	2 00
" 293.	Nelson House, best buggy,	1 00
" 123.	W. Placeway, best carriage,	2 00
" 284.	H. Lee, best grain drill,	1 00

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No. 267. K. S. Bingham, wheel cultivator, ... $1 00
" 31. D. Thompson, best plow, ... 1 00
" 34. L. B. Fonda, best horse rake, ... 50
" 269. W. C. Woodard, clover thresher, ... 2 00
" 118. Ira Brayton, best churn, ... 50
" 292. N. Toncray, best corn planter, (Discretionary,) 1 00
" 72. Israel Arms, best grain cradle, ... 50
" 224. L. B. Fonda, best field roller, ... 1 00

CLASS XII.—BUTTER AND CHEESE.

No. 95. Theodore Bridgeman, best 10 lbs. butter, ... 1 00
" 98. D. Gallatian, 2d " " 50
" 190. D. Case, crock of butter, discretionary, ... 1 00
" 86. J. F. Jennings, 1 cheese, discretionary, ... 50

CLASS XIII.—SUGAR AND HONEY.

No. 301. J. Rider, Jr., best 10 lbs. honey, ... 75
" 273. N. Chrisler, 2d " " 50
" 113. M. W. Randall, best maple sugar, ... 75

CLASS XIV.—DOMESTIC MANUFACTURES—FIRST VARIETY.

No. 93. T. Bridgeman, hearth rug, ... 1 00
" 97. Miss Jane M. Gallatian, rag carpet, ... 1 00
" 111. B. Carpenter, coverlet, ... 50
" 175. Miss C. Twitchel, 1 pair woolen stockings, ... 50
" 205. Miss E. Carpenter, 1 woolen shawl, ... 1 00
" 214. Mrs. E. Annis, 1 bed quilt, ... 1 00
" 243. Mrs. J. R. Mason, 1 lb. white woolen yarn, ... 50
" 139. Miss A. C. Isbell, 1 white bed quilt, ... 1 00
" 288. M. Fuller, 1 pair worsted stockings, ... 1 00

DISCRETIONARY PREMIUMS.

No. 185. Mrs. J. M. Murray, 2 bed quilts, ... 50
" 192. Mrs. Osborn, work basket and contents, consisting of 4 pairs of stockings, 1 pair of mittens, and other articles reported as very fine, ... 1 00

CLASS XV.—DOMESTIC MANUFACTURES—SECOND VARIETY.

No. 252. John Miller, pair calf boots, ... 1 00
" 272. Wm. Waits, " cow hide " 1 00
" 143. James Swiney, overcoat, ... 1 00

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No. 66. W. W. Griffith, chair and stand, ... $1 00

DISCRETIONARY PREMIUMS.

No. 119. Ira Brayton, earthen ware, ... 50

CLASS XVI.—DOMESTIC MANUFACTURES—THIRD VARIETY.

No. 82. L. Walker, 1 bbl. flour, ... 1 00
" 212. L. Judson, best flour barrel, ... 50

DISCRETIONARY PREMIUMS.

No. 217. A. Hubbard, bbl. flour, ... 50

CLASS XVII.—ORNAMENTAL NEEDLEWORK.

No. 48. Miss C. A. Conely, tidy mat and crotchet, ... 50
" 87. Mrs. J. F. Jennings, 1 crotchet collar, and one embroidered collar, ... 50
" 87. Mrs. J. F. Jennings, 1 pair under-sleeves, ... 50
" 140. Mrs. Geo. W. Lee, 1 stool and pair fancy boxes, ... 50
" 73. Mrs. J. Armes, 1 card basket and needle book, ... 50
" 138. Mrs. F. J. Lee, 1 tidy, ... 25
" 225. Mrs. L. B. Fonda, toilet cover, crotchet collar, ... 50

CLASS XVIII.—FLOWERS.

No. 162. Mrs. Wm. Brown, Oleander and 7 other house plants, 2 00
" 69. Dr. Bueck, 2 verbenas, ... 50

DISCRETIONARY PREMIUMS.

Mrs. J. R. Butterfield, vase of artificial cut flowers, ... 50
The petunia of Mrs. B. Campbell, favorably noticed.

CLASS XIX.—FRUITS AND VEGETABLES.

No. 224. R. Lyon, best lot of apples, ... 75
" 41. J. Brown, 2d " 50
" 126. H. Wing, 3d " 25
" 224. R. Lyon, best lot peaches, ... 50
" 21. S. M. Conely, 2d " 25
" 120. N. S. Benjamin, best quinces, ... 50
" 47. W. S. Conely, best pears, ... 50
" 68. G. Beattie, best grapes, ... 50
" 148. D. Boutell, best potatoes, ... 50
" 31. G. W. Cropsey, best sweet potatoes, ... 50
" 52. L. W. Kinney, best ruta baga, ... 50

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No. 156. T. B. Brooks, best onions,		$0 50
" 59. R. S. Hall, " beets,		25
" 147. L. Boutell, " pumpkins,		25
" 94. T. Bridgeman, " cabbage,		25
" 169. R. S. Hayner " squashes,		25
" 275. C. L. Crouse, " mellons,		25

DISCRETIONARY PREMIUMS.

No. 103. O. Morse, on corn and potatoes,		25
" 77. Thomas Gilks, on raddish,		25
" 70. Dr. Bueck, on tobacco, cauliflowers and cabbage,		50

CLASS XX.—PLOWING MATCH.

First premium, Wm. White, best ¼ acre,		3 00
2d " A. P. Dickerson, "		2 00

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The following is a report of the receipts and disbursements of the Society, for the year 1853:

RECEIPTS.

Subscription by the citizens of Brighton,		$140 00
Sale of membership tickets,		424 00
" single "		94 44
" fruit,		8 24
Donation by C. L. & R. Crouse,		10 00
Total,		$676 00

DISBURSEMENTS.

Paid for lumber and expenses of preparing Fair ground,	$168 41	
Amount of premiums awarded,	145 00	
Paid W. R. Cobb, services as Marshal, and for Assistant Marshals, and expenses of Fair,	37 13	
Paid L. Judson for mill-feed,	1 44	
" W. B. Smith, printing,	16 00	
" E. F. Burt, for services and expenses as Secretary,	25 00	
		392 98
Balance on hand,		$283 70

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Add estimated value of lumber,	$100 00
Total,	$383 70

October 12, 1853.

HOWELL AGRICULTURAL CLUB—LIVINGSTON COUNTY.

On the 1st day of January, 1853, a few farmers met at the house of W. A. Buckland, Esq., at Howell, organized a Farmer's Club, and adopted the following

CONSTITUTION:

ART. 1. This association shall be known as the Howell Agricultural Club.

ART. 2. The object of this Club shall be to give an increased interest to agriculture, by an interchange of thought, and the discussion of the various topics connected therewith, and by the exhibition of anything of interest to its members.

ART. 3. The officers of this Club shall be a President and a Secretary.

ART. 4. The duties of the President shall be to preside at the meetings of the Club, when necessary, and to discharge such duties as the office of Chairman would indicate.

ART. 5. The duties of the Secretary shall be to keep a record of the proceedings, and also to be the Corresponding Secretary.

ART. 6. The meetings of this Club shall be held on the Saturday next preceding the full of the moon, in each month, at the residence of some one of its members.

ART. 7. Any person may become a member of this Club, by subscribing to this Constitution.

ART. 8. The officers of this Club shall hold their offices for one year, and until others are elected.

ART. 9. A majority of the members present at any regular meeting, may alter or amend this Constitution, or do any other business they may think proper.

ART. 10. In this Club, all unnecessary formality shall be dispensed with, and there shall be a perfect freedom of speech and action.

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ART. 11. The wife shall accompany the husband, at the meetings of the Society.

In accordance with the provisions of the Constitution, monthly meetings have been held, each meeting having a fuller attendance and being more interesting than the former ones.

At our meeting on the 8th of this month, (April,) there were present thirty farmers, and about twenty-five ladies. The afternoon was spent in a trial of plows, a stump puller, and in general conversation.

The plows on trial, were A. Smith & Son's, of Birmingham, with jointer attached—and a plow with jointer and index attached, manufactured by Mr. A. Smith, of Howell. Both plows did good work, but no definite opinion was expressed, respecting the relative merits of the two plows and jointers, but the gentlemen present had an opportunity of witnessing the working of the implements, and satisfying themselves with regard to the utility of the jointer.

After the trial of plows, the stump puller, which was simply a lever and chain, was set in motion, and with the aid of one pair of cattle, the stumps were easily twisted from their resting places. Then followed a short practical lesson upon the pruning of grape vines. While the gentlemen were in the field, some of the ladies were busily engaged with their sewing and knitting, while others were assisting the good ladies of the house, in preparing a bountiful and delicious repast, such as farmer's wives alone know how to prepare.

Farmers are becoming much interested in these meetings, and think themselves well paid for their trouble of a ride of five or six miles, to attend the gatherings. We not only become more sociably acquainted with each other, but by an interchange of ideas, each learns something from the other, which, in many cases, proves of lasting benefit. Not only old, but new methods of farming are discussed. New implements are tried, their merits are discussed, and if found to be advantageous in the saving of time and labor, and in the better cultivation of the land, and the consequent improvement in the quantity and quality of the crops, they are adopted—if the reverse, they are rejected.

The time spent in attending the meetings of the Club, is by no means lost, for the members are men of intelligence, ready to impart and receive instruction—consequently the discussions are ably conducted, and much information is elicited, that would otherwise, in all probability

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have lain dormant. At each succeeding meeting, the members find themselves more and more ready to speak out their views upon such subjects as may come before them—hence, a full and unreserved interchange of opinions take place, and any who find they are pursuing a wrong and costly mode of farming, immediately begin to change to the better and more profitable method, and in this way find themselves well paid for the time spent at the Club.

The Club continues to increase in numbers and in interest—it is like the bee that has found where the honey is—when he gets a taste of it, he is sure to return, bringing others with him.

It will be noticed that no such office as Treasurer exists in this Society; there being no funds, and none required, a Treasurer would be a useless appendage, therefore nothing of the kind is known in the Society.

The officers elected at the first annual meeting, were:—

For President—O. J. Smith, of Howell.

For Secretary—W. A. Buckland, "

The present officers of the Society, who were elected at the second annual meeting, are—

President—N. G. Isbell, of Howell.

Secretary—E. N. Fairchild, of Marion.

Howell, April 10, 1854.

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REPORT

OF THE LENAWEE COUNTY AGRICULTURAL SOCIETY.

The annual meeting for the election of officers, was held on the —— day of January last, when the following persons were elected officers for the year 1853:

President—SAMUEL RAPPLEYE—of Ridgeway.
Vice Presidents—P. J. Spaulding—Adrian.
A. J. Hunter—Franklin.
Edwin Smith—Clinton.
D. H. Deming—Dover.
Samuel Conklin—Raisin.
Wm. Ten Brook—Fairfield.
Geo. C. Harvey—Palmyra.
Secretary—Thomas M. Cooley—of Adrian.
Treasurer—William S. Wilcox—of Adrian.
Corresponding Secretary—Robert R. Beecher—of Madison.
Executive Committee—Adrian—David Horton.
Blissfield—Joel Carpenter.
Cambridge—John Morton.
Dover—Marvin E. Palmer.
Fairfield—Davis D. Bennet.
Franklin—John M. Merrit.
Hudson—Daniel R. Daniels.

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Executive Commtitee—Madison—Augustus W. Bradish.
Macon—Simeon Davidson.
Medina—John G. Smith.
Palmyra—Edward Underwood.
Raisin—John Richards.
Ridgeway—Augustus Montgomery.
Riga—Jonathan M. Gillam.
Rollin—Wm. Beal.
Rome—David Sharer.
Seneca—Richard Kinney.
Tecumseh—R. B. Gillespie.
Woodstock—Hiram Smith.
Ogden—James C. Eddy.
City of Adrian—R. Bidleman.

Thomas M. Cooley, soon after his election as Secretary, removed to Toledo, and A. G. Eastman was subsequently elected by the Executive Committee, to fill the vacancy.

Weekly meetings of the Society, in connection with the Horticultural Society of the City of Adrian, were held every Friday afternoon, by the Fruit Committee, for the exhibition and comparison of horticultural productions. These meetings were well attended during the entire season, and the ladies, as usual, contributed their share to the interest of the Society. The show of fruit at the weekly meetings and at the Fair, was good, and far better than could have been anticipated at the commencement of the season.

The County Fair was held at Adrian, on the 5th and 6th days of October, and was by far the most successful and most numerously attended of any yet held.

The annual address was delivered by the Hon. Silas M. Burroughs, of Orleans county, New York—a copy of which has not been furnished this Society for publication.

The number of entries for premiums were as follows:

Farms, 1; grade cattle, 28; blood cattle, 21; working oxen, cows and calves, 16; horses, 64; sheep, 41; swine, 2; seeds and crops, 26; farm implements, 35; domestic manufactures, 71; butter, cheese, honey and vegetables, 93; drawings, paintings, etc., 15; poultry, 26; fruits, 74; flowers, needle and shell work, 50; miscellaneous, 24; plowing match, 5.

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Hereto attached, is a list of premiums, awarded at the close of the Fair, with copies of such reports as are deemed of interest to the Society, and the cause of Agriculture and Horticulture, generally.

The Society is now entirely out of debt, with a surplus of $125 in the hands of the Treasurer.

Yours, very respectfully,

A. G. EASTMAN,

Secretary Lenawee County Agricultural Society.

LIST OF PREMIUMS

Awarded at the Annual Fair of the Lenawee County Agricultural Society, held October 5th and 6th, 1853:

GRADE CATTLE.

L. B. Wilder, Medina, 2 year old bull, premium	$3 00
John Service, Fairfield, 2d " "	2 00
Daniel R. Griffin, Rome, 1 year " "	2 00
Rufus Kelley, Raisin, 4 year old oxen, discretionary premium,	3 00
Solomon Force, Fairfield, 2 year old heifer, 1st premium,	2 00
E. W. Pomeroy, Palmyra, " 2d "	1 00
J. L. Royce, Medina, 1 year old heifer, discretionary premium,	1 00
D. K. Underwood, Adrian, best cow,	3 00
Atwater Ives, Tecumseh, best bull calf,	1 00
Robert G. Thurber, Fairfield, 2d "	1 00
Wm. Older, Adrian, best yoke fat oxen,	5 00
Stephen Tarbor, Dover, 2d "	3 00

BLOOD CATTLE.

Daniel Todd, Medina, Devon bull 3 years old,	8 00
E. W. Pomeroy, Palmyra, " 4 "	6 00
Samuel Myres, Fairfield, Devon calf 6 months old,	2 00
" " " cow 8 years "	6 00
S. Kinney, Cambridge, Durham bull 7 " "	6 00
S. P. Booth, Hudson, 1 year old bull, cross Devon and Durham,	4 00
D. C. Blair, Franklin, Durham cow 4 years old,	8 00
" " " heifer 1 year old,	4 00
" " " bull calf,	2 00

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James Larned, Franklin, 1 cow, ... $6 00
" " 1 calf, ... 2 00
John Davenport, " " 1 00
John Richards, Raisin, 3 year old bull, cross blood, ... 6 00

WORKING OXEN.

Thomas J. Faxon, Raisin, best yoke, ... 8 00
D. B. Raymond, " 2d 5 00
W. V. Wimple, Tecumseh, 3d 4 00
C. Whaley, Seneca, 4 year old oxen, discretionary premium, .. 4 00
E. Underwood, Palmyra, " 2d " .. 2 00

HORSES FOR ALL WORK.

Manly Case, Seneca, best stallion, ... 7 00
Marshall & Tayer, Adrian, 2d 5 00
Amos Hoag, Dover, 3d 3 00

BLOOD HORSES.

Marshall & Tayer, Adrian, best stallion, ... 7 00

MARES FOR ALL WORK.

G. W. Perry, Medina, best brood mare, ... 7 00
Calvin Crane, Palmyra, 2d " 5 00
H. M. Fish, Hudson, 3d " 3 00

BLOOD MARES.

Jackson Wood, Adrian, best brood mare, ... 7 00
E. Sherman, Fairfield, 2d " 5 00
Charles W. Beers, Adrian, 3d " 3 00

THREE YEAR OLD COLTS.

C. G. Millett, Fairfield, best stallion, ... 4 00
Horace Garlick, Medina, 2d " recommend, ... 3 00
Daniel Benedict, Adrian, best gelding 3 years old, ... 4 00
D. S. Gile, Blissfield, span geldings, ... 5 00
R. S. Van Vleet, Tecumseh, 1 span 2 year old geldings, discretionary premium, ... 4 00
James S. Kinney, Seneca, one 2 year old mare, disc'y prem., 2 00
Alanson Saxton, Adrian, " stallion, " 2 00
" " " gelding, " 2 00

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MATCHED HORSES FOR ALL WORK.

Eber Adams, Adrian, best span,	$7 00
H. Randolph, Madison, 2d "	5 00
Geo. L. Bidwell, Adrian, best single horse,	4 00
Leander Wood, Rome, 2d "	3 00

SHEEP.

William Tolford, Madison, best Merino buck,	4 00
William Palmer, Adrian, 2d "	2 00
Albert Warren, " 3d "	1 00
Isaac Adams, Tecumseh, best long wool buck,	4 00
E. Townsend, Madison, 2d " "	2 00
Samuel Nash, " 3d " "	1 00
Isaac Adams, Tecumseh, best 5 long wool ewes,	5 00
Samuel Nash, Madison, 2d " "	3 00
" " best " lambs,	5 00
Isaac Adams, Tecumseh, 2d " "	3 00
W. V. Wimple, " best Saxon buck,	4 00
T. H. Bailey, Adrian, best 5 " ewes,	5 00
" " " " lambs,	5 00
" see No. 21, in Judge's report, 2d best 5 Saxon lambs,	3 00
W. V. Wimple, Tecumseh, best 5 Merino ewes,	5 00
James B. Wells, Franklin, 2d " "	3 00
Jonathan Livsay, Fairfield, best 5 fat wethers,	3 00
Wm. Ten Brook, " 2d "	2 00

SWINE.

Jacob Jackson, Madison, best boar,	4 00
Gilbert B. Mann " " breeding sow and 7 pigs,	4 00

FARM IMPLEMENTS—CLASS FIRST.

Timothy Ludlum, Adrian, best horse rake,	2 00
T. H. Bailey, " " farm wagon,	3 00
L. L. Lane, Fairfield, 2 horse power,	5 00
D. D. Pattee, Blissfield, best corn cultivator,	3 00
Timothy Ludlum, Adrian, best wheelbarrow, discretionary prem.,	50
Walter Wright, " harrow, " "	2 00
" " plow, " "	2 00

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CLASS SECOND.

Bean & Wright, Hudson, best fanning mill,	$2 00
Jesse Dod, Seneca, best ox yoke,	50
" " " ½ dozen axe helves,	1 00
A. B. Palmer, Adrian, best ½ dozen axes,	2 00
" " " corn stalk cutter,	2 00
H. Randolph, Madison, " hay rigging,	2 00
Walter Wright " " corn sheller,	2 00
Benjamin Converse, Hudson, 1 dozen corn brooms,	2 00
A. B. Palmer, Adrian, broad axe, discretionary premium,	50
" " corner chisel,	50
" " shingle knife,	50
Charles M. McKenzie, Adrian, corn stalk cutter,	2 00

DOMESTIC MANUFACTURES—CLASS FIRST.

Mrs. E. Gallop, Jr., Medina, best 10 yards flannel,	2 00
Marshall Huntington, Adrian, wool coverlet, discretionary premium,	1 00
Stephen Allen, Madison, piece flannel,	1 00
Geo. H. Wright, Dover, 1 rag carpet,	1 00
Mrs. E. Gallop, Medina, 1 pair wool socks,	75
" " 1 wool shawl,	2 00
Mrs. J. W. Helms, Adrian, 1 rug carpet,	2 00
Mrs. A. Biddle, Tecumseh, 20 yards linen cloth, discretionary premium,	1 00
Mrs. Anna T. Lee, Raisin, 1 pair wool blankets,	1 00
Mrs. Garret Ten Brook, Madison, 1 pair wool blankets,	1 00
Mrs. Elmira Wilcox, Franklin, 1 " stockings,	1 00
E. L. Selleck, Adrian, 20 yards linen cloth, discretionary premium,	1 00
J. R. Smith, Adrian, melodeons,	3 00
Miss Orpha Beckley, Madison, 1 piece tow cloth,	2 00
Mrs. David Kimball, Adrian, 1 carpet coverlet, discretionary premium,	1 00

CLASS SECOND.

Linnell & Phelbrook, Adrian, 1 pair fine boots,	1 00
" " 1 pair coarse "	1 00
" " " kip "	1 00

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L. D. Barker, Adrian, best double carriage harness, ... $3 00
J. W. Atkins, " " farm harness, ... 2 00
L. D. Barker, " " single " 3 00

CLASS THIRD.

W. E. Kimball, Adrian, 1 dressing table, ... 1 00
" " 3 varieties of chairs, ... 2 00
F. R. Stebbins, " mahogany bedstead, discretionary premium, ... 2 00
F. R. Stebbins, Adrian, 1 secretary, ... 2 00
" " 1 table, ... 1 00
Cooper & Strong, " dress coat, made by man, ... 2 00
" " pants, " 1 00
Mrs. L. B. Bowen, " satin vest, made by woman, ... 1 00
George F. Payne, " blank books, ... 1 00

CLASS FOURTH.

James Swords Adrian, best 100 brick, ... 1 00
P. Marvin, " " discretionary premium, 1 00
Cummins & Smith, Tecumseh, 2 horse carriage, 1st premium, 5 00
" " " " 2d " 3 00
Geo. L. Bidwell, Adrian, single carriage, 1st premium, ... 3 00
Cummins & Smith, Tecumseh, " 2d " 2 00
" " carriage trimming, ... 1 00
G. W. Cooper, Seneca, 4 horse shoes and nails, ... 1 00
Thomas R. Fowler, Adrian, best barrel flour, made from four bushels, 17 lbs. wheat, ... 2 00
U. D. Palmer, cider mill, McKenney & Tyler's patent, ... 3 00

BUTTER, CHEESE, HONEY AND VEGETABLES.

Calvin Bradish, Madison, best sample butter, ... 3 00
Jesse Cram, " 2d " 2 00
Mrs. Grove, Adrian best lot of cheese, ... 3 00
H. M. Higby, Madison, 2d " 2 00
T. H. Bailey, Adrian, 3d " 1 00
Nathan A. Ramsdell, Dover, best maple sugar, ... 2 00
N. E. Palmer, " 2d " 1 00
Nathan A. Ramsdell, Dover, best lot honey, ... 2 00
John Goheen, Tecumseh, 2d " 1 00

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D. K. Underwood, Adrian, best and greatest variety of vegetables, ... $3 00
Joseph Belknap, Adrian, 12 best carrots, ... 50
Jacob Jackson, Madison, " table beets, ... 50
" " " parsnips, ... 50
F. S. Davis, Palmyra, " onions, ... 50
Jesse Cram, Madison, 3 best cabbage heads, ... 50
Stephen H. Aldrich, Raisin, best egg plant, ... 50
Samuel Lothrop, Adrian, best pie plant stems, ... 50
Wm. Ten Brook, Fairfield, 12 best sweet potatoes, ... 50
Calvin Bradish, Madison, best ½ peck Lima beans, ... 50
Garret Ten Brook, Madison, best pumpkins, ... 50
Rufus Kelley, Raisin, 12 best ears seed corn, ... 50
Wm. Ten Brook, Fairfield, best ½ peck table potatoes, ... 50
Garret Ten Brook, Madison, best winter squash, ... 50

DRAWINGS, PAINTINGS, &C.

W. R. Wheeler, Adrian, best specimen of animal painting in oil, ... 2 00
M. B. House, Adrian, best water color painting, ... 1 00
W. R. Wheeler, " " specimen cattle drawing, ... 1 00
Geo. W. Merrick, " " " daguerreotype, ... 1 00
B. R. Bradish, " 2d " " 50
W. R. Wheeler, Adrian, best oil painting, ... 1 00
J. R. Perkins, " " specimen penmanship, ... 1 00
Mrs. Elmira Wilcox, Franklin, 1 piece painting, discretionary premium, ... 1 00

POULTRY.

A. J. Chappell, Adrian, best lot Shanghais, ... 1 00
D. K. Underwood, " " Polands, ... 1 00
A. J. Chappell " " large fowls, Brahma Pootras, .. 1 00
T. R. Lovett, Raisin, " ducks, ... 1 00
A. M. Baker, Adrian, " Spangled Hamburgs, ... 1 00
" " lot chickens, ½ black Spanish, discretionary premium, ... 50
A. J. Chappell, Adrian, lot white Shanghais, discretionary premium, ... 50

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ORNAMENTAL TREES, &C.

J. L. Tallman, Tecumseh, best ornamental forest trees, in highway, ... $3 00
Alexander Stebbins, Dover, best ornamental forest trees, in highway, discretionary premium, ... 1 00
Benjamin Kelley, Raisin, best ornamental trees, saved and trimmed on farm, ... 3 00

PLOWING MATCH.

Edwin P. Graham, Medina, 1st premium, ... 6 00
N. V. Brunt, Adrian, 2d " 4 00
Eli Sparhawk, " 3d " 3 00

FRUITS.

Morganza Aldrich, Fairfield, best and greatest variety of summer apples, ... 3 00
Wm. Ten Brook, Fairfield, 2d best and greatest variety of summer apples, ... 2 00
David Steer, Raisin, 3d best and greatest variety of summer apples, ... 1 00
Wm. Ten Brook, Fairfield, best single variety of summer apples, sine qua non, ... 1 00
J. S. Hodge, Ogden, best and greatest variety of fall and winter apples, ... 3 00
A. B. Chaffee, Adrian, 2d best and greatest variety of fall and winter apples, ... 2 00
Wm. Tenbrook, Fairfield, 3d best and greatest variety of fall and winter apples, ... 1 00
Geo. L. Crane, Madison, best 6 winter varieties, ... 3 00
A. B. Chaffee, Adrian, 2d " " 2 00
B. J. Harvey, Palmyra, 3d " " 1 00
J. S. Hodge, Ogden, best single variety fall apple, pippin, ... 1 00
Jacob Arnold, Adrian, best single variety winter apple, ... 1 00
D. K. Underwood, Adrian, best and largest variety of summer pears, ... 3 00
B. J. Harvey, Palmyra, best and greatest collection of fall and winter pears, ... 3 00
D. K. Underwood, Adrian, 2d best and greatest collection of fall and winter pears, ... 2 00

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A. G. Eastman, Adrian, best single variety summer pear,	$1 00
James Penniman, " " " fall "	1 00
D. K. Underwood, " " " winter, "	1 00
Franklin Osborn, Franklin, best and greatest variety of early peaches,	3 00
D. K. Underwood, Adrian, 2d best and greatest variety of early peaches,	2 00
Geo. Crane, Palmyra, best single variety of early peaches,	1 00
Franklin Osborn, Franklin, best single variety late "	2 00
Samuel Lothrop, Adrian, best and greatest variety cherries,	3 00
D. K. Underwood " 2d " " "	2 00
Mrs. A. S. Cornell, " 3d " " "	1 00
D. K. Underwood, " best single variety " "	2 00
Abner Barnard, " 2d " " "	1 00
B. F. Strong, " best and greatest variety of plums,	3 00
D. K. Underwood, " 2d " " "	2 00
Wm. Ten Brook, Fairfield, 3d " " "	1 00
D. K. Underwood, Adrian, best single variety, Imperial Gage,	2 00
" " 2d " Jefferson,	1 00
C. Woodbury, Jr., " best apricots, Dubois' Early Golden,	2 00
B. F. Strong, " 2d " Large Early,	1 00
E. P. Graham, Madison, best Orange quinces,	2 00
B. F. Strong, Adrian, 2d "	1 00
Calvin Crane, Palmyra, best other quinces,	2 00
B. J. Harvey, " 2d "	1 00
B. F. Strong, Adrian, best and greatest variety of grapes,	3 00
Samuel Lothrop, " 2d " " "	2 00
S. C. Stacy, Tecumseh, 3d " " "	1 00
Mrs. J. Dean, Adrian, best single variety of grapes,	2 00
R. G. Wheeler, Fairfield, 2d " "	1 00
Samuel Lothrop, Adrian, best and largest variety of strawberries,	2 00
C. B. Backus, Adrian, 2d best and largest variety of strawberries,	1 00
D. K. Underwood, Adrian, best single variety, Burr's wild Pine,	2 00
" " " and greatest variety of raspberries,	2 00

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Samuel Lothrop, Adrian, 2d best and greatest variety of raspberries, ... $1 00
D. K. Underwood, Adrian, best single variety do Franconia, .. 1 00
" " best gooseberries, crown bob, ... 1 00
B. F. Strong, " best and greatest variety currants, ... 1 00
C. B. Backus, " best single variety currants, red Dutch, ... 1 00

FLOWERS, ORNAMENTAL NEEDLE, AND SHELL WORK.

B. W. Steer, Adrian, best and greatest collection of hardy June roses, ... 2 00
Mrs. Dean, Adrian, 2d best and greatest collection of hardy June roses, ... 1 00
B. W. Steer, Adrian, best and greatest collection of climbing roses, ... 2 00
B. W. Steer, Adrian, best and greatest collection perpetual, at Fair, ... 2 00
Wm. Scott, Adrian, 2d best and greatest perpetual, at Fair, ... 1 00
Mrs. Dean, Adrian, best and greatest collection hardy perennial flowers, ... 2 00
B. W. Steer, Adrian, 2d best and greatest collection of hardy perennial flowers, ... 1 00
Samuel Lothrop, Adrian, best and greatest collection of annual flowers, ... 2 00
A. M. Baker, Adrian, second best and greatest collection annual flowers, ... 1 00
Samuel Lothrop, Adrian, best and greatest collection of green house plants at Fair, ... 2 00
Miss C. Ormsby, 2d best and greatest collection green house plants at Fair, ... 1 00
Mrs. D. K. Underwood, best bouquet exhibited at Fair, ... 2 00
Mrs. A. M. Baker, 2d " " " " 1 00
Mrs. L. G. Sholes, Tecumseh, best ottoman cover, ... 1 00
Mary E. Lee, Raisin, 2d best " ..Discretionary Prem.
Mrs. Samuel Jordan, Adrian, best ornamental needle work, ... 2 00
Mrs. Larzalere, " best table cover, ... 1 00
Mrs. I French, Adrian, best group flowers, ... 1 00
Mrs. Barris, Rome, best variety worsted work, ... 1 00
Mrs. Larzalere, Adrian, best fancy chain work, with needle, .. 1 00

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Mrs. D. K. Underwood, Adrian, best worked collar, ... $ 50
Mrs. Fish, " best silk bonnet, ... 1 00
Miss L. C. Southwork, Adrian, best variety of embroidery, ... 1 00
Mrs. A. G. Eastman, Adrian, 2d best " " ... 50
Mrs. S. G. Fulton, Adrian, best lamp mat, ... 50
Mrs. I. French, " best specimen wax flowers, ... 1 00
Mrs. H. R. Scott, Tecumseh, 1 basket of wax fruit, ... 1 00
Miss Wolcut, Adrian, 1 tidy, ... 50
Mrs. I. French, Adrian, 1 work stand, dicretionary premium, ... 50
Miss Wolcut, Adrian, 1 pair mits, discretionary premium, ... 50
Mrs. H. L. Higby, Madison, 3 variety grasses, disretionary prem., ... 50
E. Vandegriff, Adrian, 1 orange tree, discretionary premium, .. 50
Mrs. I. L. Tallman, Tecumseh, 1 foot stool, " .. 50
B. W. Steer, Adrian, 1 bouquet wild flowers, " .. 50
Amos A. Kinney, Seneca, best worked bed quilt, ... 2 00
J. W. Helmes, Adrian, 2d " " 1 00
Name not known, 1 worked skirt, by a Miss of 15 years, .. 50

MISCELLANEOUS ARTICLES.

Andrew Gage, Adrian, Thompson's printing ink, ... Diploma.
U. D. Palmer, " cheese press, discretionary premium, .. 1 00
" " press for paper, cloth, &c., disc'y prem., 1 00
Clay & Nichols, " gent's dressing wig, ... Diploma.
W. W. McLouth, Dover, beehive, discretionary premium, ... 50
Dr. Owen, Adrian, full set artificial teeth, discretionary premium, 1 00

REPORTS OF COMMITTEES.

To the Executive Committee of the Lenawee Agricultural Society:

The Committee on Fruit would respectfully report that in performance of the duties assigned them, they have attended the weekly exhibitions of fruit at Odd Fellows' Hall, in this city, during the summer and autumn months, and have also examined the specimens submitted to them at this Annual Fair, and as the result of their labors, would recommend that premiums on fruit offered by the Society for the present year, be awarded as follows:

[The premiums awarded by this Committee are published above.]

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In addition to the successful candidates for premiums, there are many other persons who have contributed largely to the interests of the weekly exhibitions, as well as of the present Fair, by contributions of valuable fruit, and to whom the Committee desire to acknowledge the Society's obligations, and if the offerings of any have been omitted, they are assured that it has not been intentionally.

To Mrs. I. French, J. W. Helmes, and B. W. Steer, we would offer the Society's thanks, for several varieties of strawberries.

To D. Larzalere, for black Tartarian cherries.

To B. W. Steer, for raspberries, currants and gooseberries.

To Richard Clegg, for gooseberries.

To L. Tabor, for red Dutch currants, and Cog's golden drop plums.

To J. W. Helme, for very fine melons, and English Jargonelle pears.

To Thos. Chandler, for early Joe apples.

To Jas. Field and Ira Bidwell, for peaches.

To T. M. Cooley, of Toledo, Ohio, for Clinton grapes, and several varieties of pears.

To David Horton, for Stevens' ——— pears, and several varieties of apples.

To Jonathan Harwood, for pears.

To Andrew Gage, for quinces.

To Mrs. Densmore, for fine quinces.

To Apollos Anthony, for several varieties of apples.

To John Richards, for a fine collection of apples, and one variety of pears.

To H. S. Hoxie, for apples and peaches.

To Norman Bidwell, for very large pears.

To Timothy Ludlum, for peaches.

To Moses Perkins, for apples.

To C. D. Crook, for quinces.

To R. S. Vanvleet, for winter pears.

To O. Rogers, for apples and clingstone peaches.

To Isaac Crabb, for quinces.

To N. Kinney, for peaches.

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To M. T. Nickerson, for several varieties winter apples.

To A. V. Porter, for quinces.

To E. Perkins, for several varieties of apples.

To L. Camburn, for collection of fall and winter apples.

To S. Van Aiken, for apples.

To M. Crabb, for cultivated cranberries, of great beauty, and the Committee recommend the award to him of a discretionary premium for the same.

Award one dollar to W. H. Scott, for several varieties of pears.

To Israel Pennington, for several choice varieties of apples and pears; and to any other, if such there be, who have contributed specimens of fruit.

We would also notice in commendation, a bottle of superior currant wine, manufactured by Calvin Crane.

Your Committee would state that although the weekly exhibitions have been highly creditable to the Society, the attendance on them has not been so full as would have been desirable.

It should be impressed on the community that these exhibitions are not intended for the benefit of exhibitors merely, but of the people at large. The utility of these shows, if properly conducted, can hardly be over estimated. Your committee would say, that in their opinion, there is from year to year, an increased interest in our community on the subject of fruit culture.

The display of fruit at this Annual Fair, occuring so late in the season, and in a year, in which our apple crop is so much below the average quantity, affords ample evidence of this. Works on fruit culture; agricultural and horticultural papers, treating largely on the same subject, find an increasing sale and circulation among our citizens. Commercial gardens or nurseries, are multiplying on every hand, and the annual sales of all, increasing.

In the increased production and consumption of good fruit, we rejoice, as they indicate an increasing degree of refinement and comfort among our people. May this Society ever be foremost in all efforts for diffusing knowledge, and a spirit of improvement among the cultivators of the soil.

In behalf of the Committee,

D. K. UNDERWOOD, Ch'n.

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The Committee on Flowers, Ornamental Needle, and Shell Work, respectfully report as follows:

The branch of your Society, to which, as a Committee, we have been called, is one well worthy the admiration of all. Four years ago when first you met as a Society for the mutual benefit and social interests of all, the ladies, many of them, thought it not fitting to attend; but now, how different; where can be found assembled together a more refined or intelligent circle than has for the last two years graced the outer courts of Floral Hall? and where can be found stands that speak more for the good taste and industry of our ladies?

Certainly, a love for the beautiful was first given to us by Divine Wisdom, and shall we not cherish and protect it? Though man may carve and bring to light the useful, yet woman's gentle touch is needed to give it beauty. Then, we would say to the ladies, strive to add the beautiful and ornamental to the useful, and this Society will ever be one of Lenawee's brightest spots.

CAROLINE KENNEDY,
CHRISTIANA ORMSBY,
SARAH A. MILLS,
ELLEN COMSTOCK,
ELENOR HORTON,
LYDIA A. KNOX,
LYDIA C. MITCHELL,
Committee.

The premiums awarded by the above Committee, will be found in list.

The Executive Committee would avail themselves of this occasion to express to the above Committee, their sincere thanks and regard for the good taste and beauty displayed in the ornamental arrangements of Floral Hall. Truly, woman's gentle touch was visible to every eye.

A. G. EASTMAN, *Sec'y.*

REPORT OF BURTIS BIRD, OF MACON, LENAWEE COUNTY.

1. My farm consists of 160 acres, about 120 acres improved, the balance in woods.

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2. About two-thirds of the land is sandy loam and gravel, the remainder is a clay loam, mixed with black muck. There is considerable limestone gravel mixed through the soil.

3. My mode of improving is by thorough plowing; treat all the land about in the same manner.

4 and 5. Plow from six to eight inches deep; do not use the subsoil plow.

6. Have made no experiments.

7. Oak, elm, basswood, black-walnut, hickory, white and black oak, are the principal timbers.

MANURES.

8. I usually apply about twenty loads of manure per acre; apply it on my corn ground; do not house my manure; use it in its long stages, and plow it under.

9 and 10. I make about 200 loads per year; prefer using it in a partially rotted state.

11. Have no other means to make manures than from the straw raised upon my farm, and from my stables.

12. Have used no plaster, salt, guano, or any other manure not in common use.

13. About 56½ acres—24 to wheat, 19 to corn, 5 to oats, 2½ to rye, 3 to buckwheat, ½ to potatoes, 2 to barley, and ½ to beans.

14. I sow from 1¼ to 1½ bushels of wheat to the acre, and harvest this year 17½ bushels to the acre—usually get about 18 bushels. I planted my corn in drills, about 4 feet asunder one way; averaged about 10 inches apart in the rows; planted the dented and eight-rowed yellow, about half of each—got 100 bushels of ears per acre from the dent, and about 60 bushels from the yellow; planted the last week in May. Sowed two bushels of oats per acre, harvested about 30 bushels per acre. Rye—sowed 1 1-6 bushels, and got 16 bushels per acre. Buckwheat—sowed ½, and got 13½ bushels per acre. Potatoes about middling—not measured—not rotted. Barley—sowed 2½, and harvested 27½ bushels per acre. Beans—got from half an acre, 6 bushels.

15 and 16. Prefer barn-yard manure, and after corn, sow to wheat; plow under from 6 to 8 inches deep.

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GRASS LANDS, &C.

18. Clover, timothy, and red-top—sow 10 pounds clover seed per acre; and am not particular in sowing the other grasses; seed in March; think red-top and timothy best for dairy purposes.

19. Mow about 15 acres; usually get two tons per acre; got this year about 1½ tons.

20. My meadows are all fit for the plow.

21. Have never irrigated any land, but have drained considerable by under-drains, with good success for all crops.

22. Have reclaimed no marshes.

23. Get rid of weeds by plowing and hoeing.

DOMESTIC ANIMALS.

24. Have got 5 cows, 17 young cattle, from 2 years old and under, mixed with Natives, and part blooded Durhams and Devons; 6 horses, 2 mares, 7 years old, 2 three year olds—one a mare and one a horse; 1 yearling and one spring colt.

25. Have made no experiments.

26. Feed on cornstalks and straw until about the beginning of March, then feed hay; water from well in my yard; house a part of my cattle, and have shelters for the balance.

27. Make what butter we eat in the family.

28. Keep 20 sheep: common Merinos; yield, 3 pounds wool per head. Sold this year for 48 cents; raised 8 lambs. Those fit for slaughter, would sell for $3 per head.

29. Let them pick their living when they can get to the ground; when they cannot, I feed them hay.

30. Have 22 hogs: 10 sixteen months old, 12 eight months old. No particular breed; usually way when butchered, at 16 or 18 months old, 260 pounds.

31. Have made no experiments.

32. Have 53 apple trees, all grafted; a good variety peaches, plums, cherries and pears.

BURTIS BIRD.

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REPORT OF W. A. HALL, OF TECUMSEH, LENAWEE COUNTY.

A. G. EASTMAN, Esq.—DEAR SIR:—In conformity with the regulations of the Lenawee County Agricultural Society, I forward you a certified statement of the amount, &c., of five [5] acres of corn raised by me this season.

The soil on which it was raised, was a sandy loam; had lain two years to clover pasture, has had manure drawn upon it during the past four years, and never had to exceed 100 loads of barn-yard manure upon it since it was cleared, which was 25 or 26 years ago.

MODE OF CULTIVATION.

I plowed it in the month of November, 1852, with the Eagle plow, ten inches deep, and had the second team follow in the furrow with a subsoil plow, which loosened the subsoil eight or ten inches deeper, but did not throw it out. The first of April I passed the harrow over it—about the middle of May I again went over it with a steel tooth cultivator—then marked and planted it four feet eight inches apart, each way. When I hoed it, I left but three stalks remaining in a hill. I planted one-half with the yellow sheep tooth dent, and the other half with the white gourd seed, red cob, procured from Indiana. There was not much difference in the yield of the two kinds. Before harvesting, I had five acres accurately measured with chain, by John S. Clark. Accurate measurement of corn in the ear, 504 bushels. One and-a-half bushels of ears shelled, produced one bushel of corn, which makes 336 bushels upon 5 acres, or 67 1-5th bushels per acre.

EXPENSES OF CULTIVATION, &C.

Plowing 5 acres, at $2 50 per acre,	$12 50
Harrowing, " 62½ cents "	3 13
Marking and planting 5 acres at 50c,	2 50
Man and horse 4 days cultivating, at 1 25,	5 00
Man 6 days hoeing, at 87½ cents,	5 25
Man 5 days cutting up, at 87½ cents,	4 38
Man 15 days husking, at 87½ cents,	13 13
5 cwt. plaster, at 50 cents,	2 50
5 bushels ashes, at 10 cents,	50
1 day putting on ashes and plaster,	88
Total,	$49 77

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336 bushels, at at 67 cents,	$189 00	
10 loads of cornstalks, at 1 00,	10 00	
8 loads of pumpkins, at 75 cents,	6 00	
		205 00
Expense of cultivation, &c.,		49 77
Net profit,		$155 23

W. A. HALL.

STATE OF MICHIGAN, } ss.
LENAWEE COUNTY.

Personally appeared the above named Wm. A. Hall, before me, a Justice of the Peace, in and for said county, and testified that the above statement is true, according to his best knowledge and belief.

J. T. KEIES,
Justice of the Peace.

Clinton, January 18, 1854.

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REPORT

OF THE MACOMB COUNTY AGRICULTURAL SOCIETY.

J. C. Holmes, Esq., *Secretary Michigan State Agricultural Society:*

Dear Sir—In compliance with the Constitution of the Michigan State Agricultural Society, the following is respecfully submitted as the report of the proceedings of the Macomb County Agricultural Society, for the year 1853:

The Society held its fourth Annual Fair at Utica, on the 12th and 13th days of October last. The neat cattle, horses and sheep, exhibited at our last Fair, showed a very great improvement of stock in the county, over any former year—and the beneficial influence of Agricultural Societies was so apparent, that none (but those who would not,) could fail to be convinced that their tendency was good.

The operations of our Society are no longer considered an experiment, but we consider it as one of the permanent institutions of the county, and we confidently believe that the taxable property in the county, has been increased by its influence, more than enough to pay the amount received from the county treasury, for its benefit, by the laws of the State.

The amount of money received by the treasurer during the last year was $710 17:

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The amount received for tickets at the Fair, including membership, was,		$410 14
The amount from the county treasury,		99 30
From all other sources, including $92 47, amount on hand at the close of last year,		200 73
Total,		$710 17
The amount paid for premiums,	$450 00	
" " diplomas,	112 00	
" " expenses,	150 00	
		$712 00

LIST OF PREMIUMS.

CATTLE—DURHAMS.

Bulls 3 years old and over—1st premium to No. 38, Ira Phillips, Armada, diploma and	$3 00
2d premium to No. 114, David Donaldson, Shelby, Transactions and	2 00
Two years old—1st premium to No. 42, Gilbert Longstoff, Macomb,	3 00
3d premium to Henry Tewilegar,	Book.
Bull calves—1st premium to No. 450, L. M. Sackett,	2 00
2d premium to No. 426, Robert Millikin, Bruce,	1 00
Cows—1st premium to No. 251, James Flower, Armada, diploma and	3 00
2d premium to No. 23, Geo. W. Phillips, Armada,	2 00
3d " 22, " "	Book.
Heifers 2 years old—1st premium to No. 252, James Flower, Armada,	3 00
Heifers 1 year old—1st premium to No. 24, G. W. Phillips, Armada,	2 00
Heifer calves—1st premium to No. 33, Ira Phillips, Armada,	2 00

DEVONS.

Cows—1st premium to No. 34, Ira Phillips, Armada, diploma and	3 00
Bulls—1st premium to No. 191, P. R. Leach, Utica, diploma and	2 00

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CROSS OF DURHAM AND DEVON.

Bulls 3 years old and over—1st premium to J. F. Gilbert, No. 187, Richmond, diploma and	$3 00
2d premium to William Gass, No. 379, Ray, Transactions and	2 00
Bulls 2 years old—1st premium to L. D. Owen, No. 355, Bruce,	3 00
Bulls 1 year old—1st premium to No. 431, Calvin Pierce, Shelby,	2 00
Bull calves—1st premium to No. 82, Ira. H. Butterfield, Utica,	2 00
Cows—1st premium to No. 359, L. D. Owen, Bruce, diploma and	3 00
2d premium to No. 115, David Donaldson, Shelby, Transactions and	2 00
Heifers 2 years old—1st premium to No. 26, G. W. Phillips, Armada, Transactions and	3 00
Heifers 1 year old—1st premium to No. 31, Ira Phillips, Armada,	2 00
2d premium to No. 427, Robert Millikin, Bruce,	1 00
Heifer calves—1st premium to No. 27, G. W. Phillips, Armada,	2 00

CROSS OF DURHAM AND NATIVES.

Bulls 3 years old or over—1st premium to No. 256, Daniel S. Ingraham, Lenox, diploma and	3 00
Bulls 2 years old—1st premium to No. 240, John Price, Washington, Transactions and	3 00
Bulls 1 year old—1st premium to 186, Leonard Lee, Armada,	2 00
Bull calves—1st premium to No. 258, James Flower, Armada,	2 00
Cows—1st premium to No. 34, Ira Phillips, Armada, diploma and	3 00
2d premium to No. 108, Wm. Canfield, Clinton, Transactions and	2 00
3d premium to No. 40, Charles Phillips, Armada,	Book.
To No. 121. J. H. Phillips, Armada,	3 00
To No. 257, Daniel Ingraham,	2 00
Heifers 2 years old—1st premium to No. 43, James Morton, Bruce, Transactions and	3 00
2d premium to No. 84, Ira H. Butterfield, Utica,	2 00
3d premium to No. 28, G. W. Phillips,	Book.

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Heifers 2 years old—1st premium to No. 64, James B. St. John, Armada, ... $3 00
2d premium to No. 39, Ira Phillips, Armada, ... 2 00
Heifer 1 year old—1st premium to No. 41, Charles Phillips, Armada, ... 2 00
2d premium to No. 123, Jas. H. Phillips, Armada, ... 1 00
3d " " 362, Albert Edgett, Bruce, ... Book.
Heifer calf—1st premium to No. 258, Daniel S. Ingraham, Richmond, ... 2 00

CROSS OF DEVON AND NATIVE.

Bull calves—1st premium to No. 271, R. P. Eldredge, Mt. Clemens, ... 2 00
2d premium to No. 208, Lewis Drake, Utica, ... 1 00
3d " " 79, Wm. H. Lester, ... Book.
Cows—1st premium to No. 170, P. K. Leech, Utica, diploma and 3 00
2d premium to No. 581, John Chapman, Shelby, ... 2 00
3d " " 582, " " ..... Book.
Heifer calves—1st premium to No. 65, James B. St. John, Armada, ... 2 00
2d premium to No. 169, P. K. Leech, Utica, ... 1 00
3d premium to No.
Heifer, 1 year old—1st premium to No. 168, P. K. Leech, Utica, ... 2 00
Steer calves—1st premium to No. 196, Joseph Sikes, Washington, ... 2 00
2d premium to No. 113, Wm. Canfield, Clinton, ... 1 00
3d " " 101, Wm. H. Lester, Utica, ... Book.

NATIVE CATTLE.

Bulls 3 years old or over—1st premium to No. 11, A. Streeter, Bruce, diploma and 3 00
2d premium to No. 527, James Parish, ... 2 00
Bull one year old—1st premium to No. 280, Philander Ewell, Shelby, ... 2 00
Bull calves—1st premium to Jay W. Phillips, Shelby, ... 2 00
2d " " " " 1 00
3d " " " " ..... Book.

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Cows 4 years old or over—1st premium to No. 63, James B. St. John, Armada, diploma and $3 00
2d premium to No. 278, Justin Bixley, Trans. and 2 00
3d " " 412, Nehemiah Thompson, Washington, .. Book.
Heifers 3 years old—1st premium to No. 93, Arbitus Smith, Washington, Transactions and 3 00
Heifers 2 years old—1st premium to No. 274, E. Brooks, ... 3 00
2d " " 386, Wm. Stevens, 2 00
3d " " 316, Jno. H. Stringham, ... Book.
Heifer calf—1st premium to No. 275, E. Brooks, ... 2 00
Working oxen—1st premium to No. 526, Jeremiah Thompson, diploma and 3 00
2d premium to No. 411, John O. Riley, Transactions and 2 00
3d " " 188, John F. Gilbert, ... Book.
Best 5 yoke of oxen from one town—1s premium to No. 522, town of Shelby, ... 10 00
Steers 4 years old—1st premium to No. 124, John H. Phillips, Transactions and 3 00
2d premium to No. 578, Gilbert Rice, ... 2 00
3d " " 540, Joseph Campbell, ... Book.
Three year old steers—1st premium to No. 102, W. H. Lester, ... 3 00
2d premium to No. 202, Jereh. Curtis, ... 2 00
3d " " 106, Wm. Canfield, ... Book.
Two year old steers—1st premium to No. 297, John B. Chapman, ... 2 00
2d premium to No. 107, W. Canfield, ... 1 00
3d " " 174, C. G. Whitney, ... Book.

HORSES.

Stallions 4 years old or over—1st premium to No. 73, B. G. Whitney, Armada, diploma and 3 00
2d premium to No. 342, W. Fillmore, Ray, Transactions and .. 2 00
3d " " 580, Morvil Shaw, Romeo, ... Book.
Stallions 3 years old—1st prem., to No. 516, John C. Lawrence, Washington, Transactions and 3 00

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Stallions 2 years old—1st premium to No. 391, C. Goodrich, Bruce, ... $2 00
2d prem., to No. 423, R. Millikin, Bruce, ... 1 00
Stallions one year old—1st premium to No. 3, James Crawford, Armada, ... 2 00
2d prem., to No. 472, M. S. Hadley, Washington, ... 1 00
3d " " 193, Stephen Harvey, Washington, ... Book.
Stud colts—1st premium to No. 425, Robert Millikin, ... 2 00
2d " " 269, R. P. Eldredge, ... 1 00

BROOD MARES.

1st premium to No. 1, James Crawford, diploma and 3 00
2d premium to No. 382, W. A. Wales, Transactions and 2 00
3d " " 424, R. Millikin, ... Book.
Mares 3 years old—1st premium to No. 579, Morvil Shaw, Transactions and 3 00
2d premium to No. 370, Fred. More, ... 2 00
3d " " 573, Jeremiah Curtis, ... Book.
No. 2. Best mare 2 years old, James Crawford, ... 2 00
" 348. 2d " " Marshal Sanmer, ... 1 00
" 201. 3d " " Jeremiah Curtis, ... Book.
" 469. Best mare 1 year old, Wells Burt, ... 2 00
" 192. 2d " " Phillip W. Price, ... 1 00
" 539. 3d " " Samuel Thompson, ... Book.
" 4. Best mare colt, James Crawford, ... 2 00
" 180. 2d " Jonas A. Odle, ... 1 00
" 120. 3d " Jo. H. Philips, ... Book.
" 182. Best gelding 3 years old, Joseph Moses, ... 3 00
" 309. Best gelding 2 years old, John Nassamor, ... 2 00
" 194. 2d " " Joseph Sikes, ... 1 00
" 438. 3d " " John Keeler, ... Book.

FOREIGN HORSES.

No. 14. Best stallion, 9 years old, B. G. Whitney, ... Diploma.

MATCHED HORSES.

No. 287. Best span matched horses, Lorin Andrews, ... 4 00
" 21. 2d " " A. W. Sterling, ... 3 00
" 502. 3d " " Shubel Smith, ... Book.

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No. 336. Best single horse, G. P. Newberry, ... $3 00
" 286. 2d " Lorin Andrews, ... 2 00
" 239. 3d " Charles Crisman, ... Book.
" 529. Best single pony, Joseph Thompson, ... 2 00
" 337. 2d " Amos Little, ... 1 00
" 422. Best gelding colt, Geo. St. John, ... Book.

FRENCH SHEEP AND THEIR GRADES.

No. 82. Best buck 2 years old, Ira H. Butterfield, diploma and 3 00
" 298. 2d " " John Chapman, ... 2 00
" 5. 3d " " Hiram Barrows, ... Book.
" 203. Best buck 1 " Stephen H. Davis, Transactions and 3 00
" 204. 2d Best buck 1 year old, S. H. Davis, ... 2 00
" 205. 3d " " S. H. Davis, ... Book.
" 69. Best pen 5 buck lambs, Geo. St. John, ... 3 00
" 167. 2d " " Payne K. Leech, ... 2 00
" 84. 3d " " Ira H. Butterfield, ... Book.
" 89. Best pen 5 ewes 2 years old, " diploma and 3 00
" 88. " 1 " " Transactions and 3 00
" 165. 2d " " " Payne K. Leech, ... 2 00
" 173. Best pen of ewe lambs, C. W. Whitney, ... 3 00
" 70. 2d " " Geo. St. John, ... 2 00
" 166. 3d " " Payne K. Leech, ... Book.

SPANISH SHEEP AND THEIR GRADES.

No. 506. Best buck 2 years old, Geo. Andrews, diploma and .. 3 00
" 126. 2d " Charles Leech, ... 2 00
" 491. 3d " Hiram Taylor, ... Book.
" 127. Best buck 1 year old, Charles C. Leech, Transactions and 3 00
" 492. 2d best buck 1 year old, Hiram Taylor, ... 2 00
" 128. 3d " " Charles C. Leech, ... Book.
" 38. Best 5 ewes 2 years old, Geo. St. John, diploma and .. 3 00
" 172. 2d " " C. W. Whitney, ... 2 00
" 16. 3d " " S. H. & A. H. Ewell, ... Book.
" 494. Best 5 ewes 1 year old, Hiram Taylor, ... 3 00
" 87. 2d " " Ira H. Butterfield, ... 2 00
" 20. 3d " " S. H. & A. H. Ewell, ... Book.

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No. 85. Best pen 5 buck lambs, Ira H. Butterfield, ... $3 00
" 86. 2d " " " 2 00
" 433. 3d " " Calvin Pierce, ... Book.
" 495. Best pen 5 ewe lambs, Hiram Taylor, ... 3 00
" 19. 2d " " S. H. & A. H. Ewell, ... 2 00
" 292. 3d " " Horace Hall, ... Book.

LONG WOOL AND THEIR GRADES.

No. 520. Best buck 2 years old and over, John Inman, diploma and 3 00
" 174. 2d best buck 2 years old and over, M. S. Hadley, ... 2 00
" 117. 3d " " " S. A. Benton, ... Book.
" 473. Best buck 1 year old, M. S. Hadley, Transactions and 3 00
" 118. 2d " " S. A. Benton, ... 2 00
" 482. 3d " " Elias Stone, ... Book.
" 480. Best 5 buck lambs, " 3 00
" 556. " ewes 2 years old, " diploma and 3 00
" 521. Best 5 ewe lambs, John Inman, ... 3 00
" 220. 2d " N. R. Holdridge, ... 2 00
" 481. 3d " Elias Stone, ... Book.

SOUTH DOWNS.

No. 111. Best buck 2 years old, W. Canfield, diploma and 3 00
" 98. " 1 " W. H. Lester, Transactions and 3 00
" 97. 2d " " " " 2 00
" 96. Best 5 buck lambs, W. H. Lester, ... 3 00
" 95. " ewe " " 3 00
" 94. " ewes 2 years old, " 3 00
" 110. " " W. Canfield, diploma and 3 00

FOREIGN SHEEP.

No. 13. Best buck 2 years old, I. H. Butterfield, diploma.
" 75. Best Silecian buck 2 years old, B. G. Whitney, discretionary premium, diploma and 3 00

SWINE.

No. 223. Best brood sow, Samuel Ladd, diploma and 3 00
" 264. 2d " H. A. Freeland, ... 2 00
" 323. Best litter pigs, Samuel Ladd, ... 3 00
" 264. 2d " H. A. Freeland, ... 2 00

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No. 71. Best boar, Geo. St. John, diploma and $3 00

FARMING IMPLEMENTS.

No. 181. Best farm wagon, John Moses, diploma and 3 00
" 182. 2d " " 3 00
" 273. Lot horse shoes, James Alexander, ... Book.
" 463. Horse rake, James Gass, ... 2 00
" 338. Single buggy, Luman Beebe, diploma and 2 00
" 589. Double buggy, Joseph Cole, ... Book.
" 513. 1 pair whiffletrees, Mussey & Nichols, ... 50
" 514. 1 neck yoke, " 50
" 533. 1 clover rake, David Conner, ... Book.

BREAD, BUTTER, HONEY, CHEESE &C.

No. 15. Best 3 loaves of wheat bread, A. Streeter, ... 2 00
" 288. 2d " " " Mrs. Lorin Andrews, .. 1 00
" 325. 3d " " " Samuel Ladd, ... 50
" 343. Best 30 lbs butter, made June, ... 3 00
" 69. Best 10 lbs butter, made fall, James B. St. John, ... 2 00
" 459. 2d " " John M. Crawford, ... 1 00
" 659. 3d " " Mrs. C. C. Leech, ... Book.
" 13. Best 25 lbs cheese, A. Streeter, ... 2 00
" 12. 2d " " 1 00
" 231. Best 10 lbs honey, Wm. Eaton, ... 1 00
" 265. 2d " Henry Freeland, ... 75
" 390. 3d " Henry L. Courter, ... Book.

DISCRETIONARY PREMIUMS.

No. 290. 1 jar pickled peaches, Mrs. Lorin Andrews, ... Book.
" 511. 1 bottle of domestic wine, S. Ladd, ... "

DOMESTIC MANUFACTURES.

No. 214. Best pair linen stockings, Mrs. E. Chapin, ... 1 00
" 215. 2d " " " 50
" 216. Best pair cotton " " 1 00
" 457. 2d " " J. M. Crawford, ... 50
" 531. Best woolen " Mrs. B. Andrews, ... 1 00
" 508. 2d " " " 50
" 456. 3d " " J. M. Crawford, ... Book.

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No. 410.	Best lot woolen yarn, E. M. Perry,	Book.
" 553.	2d " " Miss J. Mack,	"
" 455.	3d " " J. M. Crawford,	"
" 61.	Best pair woolen mittens, Miss J. Mack,	75
" 218.	2d " " Miss E. Chapin,	50
" 217.	3d " " "	Book.
" 307.	Best " gloves Mrs. J. Porter,	50
" 461.	2d " " Mrs. E. Chapin,	Book.
" 60.	Best pair woolen socks, Miss J. Mack,	50
" 409.	Best lamp mat, E. M. Perry,	Book.
" 326.	2d " Mrs. S. Ladd,	Book.
" 295.	Best bed spread, Horace Hall,	Book.
" 577.	2d " Mrs. Orville Richards,	Book.
" 372.	Safe cover, James Alexander,	50
" 349.	Chair cover, O. Millard,	50
" 443.	Best woolen shawl, J. S. Persall,	1 00
" 442.	2d " " "	50
" 58.	3d " Miss J. Mack,	Book.
" 56.	Best pair woolen blankets, Miss J. Mack,	2 00
" 454.	2d pair woolen blankets, J. M. Crawford,	1 00
" 45.	3d " " Miss J. Mack,	Book.
" 405.	Best coverlet, Mrs. S. Perry,	3 00
" 284.	2d " Joel Thompson,	2 00
" 45.	3d " Jane Mack,	Book.
" 49.	Best 10 yards rag carpet, Jane Mack,	2 00
" 43.	2d " " Calvin Pierce,	1 00
" 281.	3d " " Philander Ewell,	Book.
" 53.	Best 10 yards white flannel, Miss Jane Mack,	3 00
" 398.	2d " " E. Ingalsby,	2 00
" 50.	3d " " Miss Jane Mack,	Book.
" 453.	Best 10 yards red flannel, J. M. Crawford,	3 00
" 51.	2d " " Jane Mack,	2 00
" 54.	Best ten yards woolen plaid, Jane Mack,	3 00
" 398.	2d " " E. Ingalsby,	2 00
" 384.	3d " " O. Freeman,	Book.
" 52.	Best ten yards satinet, Jane Mack,	2 00
" 591.	" " wool carpet, J. C. Lawrence,	3 00

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No. 285. 2d best ten yards wool carpet, Joel Thompson, ... $2 00
" 518. 3d " " " J. C. Lawrence, ... Book.
" 400. Best five yards full cloth, E. Ingalsby, ... 2 00
" 48. Best ten yards tow cloth, Jane Mack, ... 2 00
" 55. 2d ten yards tow cloth, Jane Mack, ... 1 00
" 402. 1 piece linen, kersey, E. Ingalsby, ... 1 00
" 406. Best ten yards rag and yarn carpet, Mrs. S. Perry, .. 2 00
" 407. 2d " " " " 1 00
" 401. Best linen diaper, E. Ingalsby, ... Book.
" 266. Best pair woolen drawers, A. Edgett, ... 50
" 367. " cotton " " ..... Book.

NEEDLE, SHELL, WAX WORK, &C.

No. 183. One tissue of flowers, Joseph Moses, ... Book.
" 393. " " Mrs. Scramber, ... Book.
" 184. One lob sea shell, Joseph Moses, ... Book.
" 245. One tissue flowers, Hiland Obir, ... Book.
" 331. Best quilt, Mrs. Geo. King, ... 2 00
" 364. 2d quilt, A. Edgett, ... 1 00
" 243. 3d quilt, Hiland Ober, ... Book.
" 365. White quilt, A. Edgett, ... Book.
" 308. One shell box, Mrs. J. Porter, ... Book.
" 419. One cap, Mr. Lorin Andrews, ... Book.
" 333. One wrought dress, Lorin Andrews, ... Book.
" 341. " cap, O. Millard, ... Book.
" 335. One perforated board, Geo. King, ... Trans.
" 334. One coral basket, George King, ... Book.
" 550. One case wax flowers, Mrs. E. Adair, ... Book.
" 374. One basket wax fruit, James Alexander, ... Trans.
" 551. One mezzotint painting, Mrs. E. Adair, Utica, ... Trans.
" 553. One bonnet, Mrs. Sedman, Romeo, ... Book.
" 554. One bonnet, Miss C. Bennett, Romeo, ... Book.
" 538. One portrait painting, James Alexander, Utica, ... Trans.
" 515. One wrought skirt, L. Green, Clinton, ... Book.

FRUIT AND FLOWERS.

No. 79. Best six varieties of winter apples, Ira Phillips, ... 2 00
" 487. 2d best six varieties of winter apples, A. Streeter, ... 1 00
" 273. 3d " " A. Freeland, ... Book.

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No. 462.	Best 6 varieties fall apples, E. Chapin,	$2 00
" 782.	2d " " Ira Phillips,	1 00
" 395.	3d " " Nathan Keeler,	Book.
" 479.	Best variety of pears, M. S. Hadley,	2 00
" 237.	2d " " H. Andrews,	1 00
" 396.	3d " " N. Keeler	Book.
" 489.	Best 3 quinces, L. Sackette,	1 00
" 355.	2d " " Jay W. Phillips,	50
" 357.	3d " " "	Book.
" 345.	Best and greatest variety of peaches, A. W. Sterling,	1 00
" 416.	2d " " " James Cheney,	50
" 235.	Best and greatest variety of grapes, R. Watson,	1 00
" 236.	2d " " " H. Andrews,	50

VEGETABLES.

No. 10.	½ bushel onions, H. Mahaffy, Bruce,	Book.
" 104.	Best 6 heads cabbage, W. W. Andrus,	50
" 328.	One winter squash, J. Millard,	50
" 444.	One pumpkin, S. S. Persall, Shelby,	50
" 490.	One lot sweet potatoes, L. Sackette,	1 00
" 519.	4 red beets, H. Lawrence,	Book.

BOOTS, SHOES, AND HARNESS.

No. 277.	Best buggy harness, A. C. Smith, Mt. Clemens,	2 00
" 588.	Best double harness, Joseph Cole,	2 00
" 524.	2 pair coarse boots, James Abernethy,	1 00
" 525.	1 " fine " "	1 00

POULTRY.

No. 262.	Best coop Shanghais, D. Voorheis, Romeo,	2 00
" 261.	2d " " " "	1 00
" 178.	Best coop Dorkins, C. G. Whitney, Utica,	2 00
" 177.	2d " " " "	1 00
" 130.	Best pair white Shanghais, C. C. Leech,	2 00
" 248.	Best pair Cochin China, A. Hovey, Romeo,	2 00
" 175.	Best coop turkeys, C. G. Whitney,	2 00
" 176.	2d " " "	1 00
" 434.	One coop wild geese, C. Pierce,	Trans.

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MISCELLANEOUS ARTICLES—DISCRETIONARY PREMIUMS.

No. 112. One bearskin robe, W. W. Andrus,..... Book.
" 447. One parlor stove, C. Sturdevant & Co.,..... 1 00
" 446. 2d parlor stove, C. Sturdevant, & Co.,..... 50
" 534. One American Eagle stove, D. Zeloff,..... 1 00
" 535. 2d " " " " 50
" 536. 3d " " " " ..... Book.
" 571. One dozen patent clothes pins,..... 25

At the close of our Fourth Annual Fair, the Society was called to order by the President, when we were permitted to listen to a very interesting and instructive address, delivered by the Hon. James L. Conger, a copy of which address the Society unanimously solicited (by vote) for publication, and to be entered upon the records of the Society.

The following gentlemen were elected officers for the ensuing year, viz:

President—WILLIAM CANFIELD—of Clinton.
Secretary—Dexter Mussey—of Rome.
Treasurer—P. K. Leech—of Utica.
Executive Committee—James B. St. John—of Armada.
Ira H. Butterfield—of Utica.
Lorin Andrews—of Washington.
M. S. Hadley—of "
Jeremiah Sabin—of Richmond.

In closing this report, allow me to say, that the county of Macomb is one of the lake and river counties, and has generally been regarded as a wet, marshy district; but during the past five years, the farmers of western New York, in their migrations westward, have had their attention directed to this county, and instead of the low, swampy land anticipated, they have been surprised to find it rolling, generally dry, and in every respect as well fitted for agricultural purposes, as the far famed lands they had left; consequently a very strong current of emigration has flowed in this direction, which, together with the impetus given to farming by the organization and operation of Agricultural Societies, has caused a very material advance in real estate; and yet, as is always the case, when enterprise and improvement are the order of the day, the farmer clears a much larger per cent. on the present value of

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the farm, than at former prices. It is my opinion, that no county in the State affords better encouragement for the emigrant, whether farmer or mechanic, than does this county.

In substantiating this opinion, I will allude to its favorable location in respect to market.

The county lies, as you are aware, directly north of Wayne, and its southern boundary extends to within six miles of Detroit, which is the principal depot of the State. From Detroit, two plank roads extend through nearly the entire length of this county, one of which stretches on still farther, into the county of Lapeer, where is found some of the choicest pine in the State—thus bringing the best pine lumber, as it were, to every farmer's door.

The soil in this county, is of every variety found in the State—the sandy, with a mixture of clay and gravel—clay, with a mixture of sand and gravel, and a loamy muck soil.

The western tier of towns are high, rolling lands; are divided into plains and oak openings, and are well adapted to the growing of wheat or any other grain, and are found to be as productive as any lands in this State or the State of New York, the Genesee Valley not excepted.

The Eastern part of the county is divided into what are usually termed grazing and grain land; indeed, those lands that have heretofore been considered adapted to the growing of grass only, are found by proper management, to be capable of producing more than an average crop of most kinds of grain.

I have thus glanced at the natural resources of this section of our beautiful State, and I think we are called upon by every principle of interest and policy, to avail ourselves of the great advantages here spread before us.

The earth is always a bountiful rewarder of the faithful husbandman, and none more so than that of Michigan. Yet there are a few specimens of the hold-back, stand-still stamp of men, full of prejudices, who always oppose any and every improvement, with that old and convenient argument—"it is all a humbug."

There are several streams of water coursing their way through this county, affording abundant water-power for all practical purposes; indeed, the flour mills now in operation, are equal to one for every town-

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ship in the county, and some of the most valuable privileges remain unoccupied.

Our well-water, with a very few exceptions, is remarkably good and healthy.

Considering that all kinds of crops have been produced upon land half cleared, and not more than half tilled, may we not safely calculate, now that a spirit of advancement is manifest among our farmers, and a very general attention is being paid to the selection and use of improved tools and implements, the best of teams, seeds, &c., as well as a more systematic and thorough cultivation, together with the local advantage of markets, that very soon the county of Macomb will present one of the fairest agricultural districts in this or any other State? We are aware that we set our standard of excellence very high, but the good must be reached.

Very respectfully,

DEXTER MUSSEY,

Sec'y Macomb County Agricultural Society.

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REPORT

OF THE MONROE COUNTY AGRICULTURAL SOCIETY.

In no previous year have we had in this county so many State and County Fairs as during the present season; and never before has such general interest been manifested in Agricultural pursuits. All classes and professions are beginning to realize the importance of the farmers calling, and to respect it as among the most honorable in which man can engage. It has within a few years become so identified with the sciences, and many of the improvements of the age, and partakes so much of the progressive spirit that characterizes the times, as to give it additional dignity and importance, and the respect of all, as a science of paramount importance. This should ever be the case. To respect and support it as such is the surest and easiest method we have to protect our popular institutions; for it is not upon the population of crowded cities, so much as upon agriculturists scattered throughout the Republic, calmly looking upon passing events, and passing unbiased judgment upon them, free from passion and excitement, that we are to look for support in the hour of peril to our country.

The Fourth Annual Fair for Monroe County which closed on the 13th instant, was such as to give greater confidence to the friends of the organization of its stability and usefulness in the future. Many who at first opposed, or enlisted in the enterprise, fearing it would not promote the ends sought, after seeing the many beneficial results which

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have followed, have yielded their objections, and are now among its firmest friends and supporters.

Dissatisfaction has at times been manifested, more particularly with the judgment of committees; but less perhaps this season than formerly, for persons interested begin to see how impossible it is for committees to decide in a hurried manner, as they do, on stock and articles of merit, and which might well baffle the soundest judgment, without, in some cases being liable to err in judgment. This arises in part by the neglect of the committee-men, first appointed, to attend to the duty assigned them. We hope hereafter that the Executive Committee, in selecting such committees, will find those who take interest enough to act, or have independence enough to give an opinion, without fear of offending competitors for premiums.

A discretionary Committee, and a Committee on the Fine Arts were appointed, and in the absence of a regular report, instruct us to say they were highly pleased with the articles presented. The Paintings, Drawings, Daguerreotypes, &c., in the department of the Fine Arts, exhibited taste, cultivation and talent of the highest order. They were particularly pleased with the portrait of *The Snuff Taker*, painted in water colors by Miss Mary Van Brunt. The painting is magnificently done, and exhibits the highest degree of artistic talent, and the Committee awarded to her the first premium of $3.

A Landscape, in mezzotint, by ——— of the Young Ladies' Seminary, was very much admired by the Committee, who awarded the 2d premium of $1.

The Landscape, with figures in *sepia*, by Miss Harriet Haskell, was excellent, and worthy of the 3d premium of $1

Old Church and Landscape, drawings by Miss Gilbert, received the 4th premium of 50 cents.

The Daguerreotypes, by Dr. L. S. Stevens, exhibited a perfection in the art which we have never seen excelled, and the Committee recommended a premium of $2.

Among the articles on exhibition were many not entitled to premiums, according to the published list. There were several boxes of choice honey, and some of it was used quite too freely, which the Executive Committee will guard against in future, as well as to adopt measures to secure butter from the dust and too much handling.

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A variety of edge tools were exhibited by Wm. Kennell, of this city, one of the best edge tool makers in the West; and a sofa of superior workmanship, by Jesse Consor, of this city. Several of our merchants also made a display. Sackett & Co. had a show case of assorted articles. Prof. Ricqles exhibited a beautiful melodeon, musical instruments, and articles of taste, use and ornament. W. H. Boyd, and C. Taylor, had stoves, cutlery, &c., displayed to advantage.

The remark was made by many individuals, that the vegetables were the best they had ever noticed at any Fair. The variety presented by Mrs. Haskell was very large and excellent in quality, and spoke well for her taste, industry and skill, in the cultivation of the soil. When the ladies excel the gentlemen as gardeners or horticulturists, we do not hesitate to say they are entitled to equal rights as citizens.

The annual address, by Isaac P. Christiancy, Esq., was able and appropriate—illustrating most clearly how intellectual and physical labor is necessarily united for the mutual benefit of all, and how dependent one is upon the other for success. He alluded to the results achieved by steam—to the engine, the product of mental labor, how it enhances the value of agricultural products—how scientific investigation and mental labor combine in various ways with physical labor, to develop the agricultural resources and products of a country, and produce the astonishing progress, so peculiar to the age. But a copy of the address, we hope, will be furnished for publication, in accordance with a resolution passed, when our readers will judge more correctly of its merits.

REPORTS OF COMMITTEES.

HOUSEHOLD MANUFACTURED ARTICLES.

The Committee to whom was referred "household manufactured articles, including woolen, linen, and silk goods," beg leave to make the following brief report:

Your committee have examined many articles, and regret being obliged to withhold premiums in several cases, on account of the limited means placed at their disposal. They have awarded the following premiums:

M. Fishburn, best woolen carpet, ... 75

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Wm. Dunlap, best rag carpet,	$1 00
" 2d "	50
Mrs. J. L. Tucker, 3d "	25
Mrs. O. G. Smith, best piece plaid flannel,	1 00
Mrs. G. R. Smith, 2d "	50
" best piece full cloth,	1 00
Mrs. O. G. Smith, 2d "	50
D. E. Morris, best domestic silk,	25
Mrs. S. G. Doty, best pair wool hose,	25
D. T. Galloway, " half-hose,	25
S. Sweeney, best wool yarn,	50
Mrs. L. Sackett, 2d "	25
J. D. Hunt, best pieced quilt,	1 00
P. S. Underhill, 2d "	75
Eliza Bisbee 3d "	50
D. T. Galloway, best domestic coverlet,	1 00
D. E. Morris, 2d " "	75
S. Sweeney, best wool blanket,	50
Sophrona Sheldon, best embroidered shawl,	50

L. F. JACKSON,
MRS. L. DARRAH,
MRS. W. M. SMITH,
MRS. W. H. MANNING,
MRS. O. B. LAWRENCE,
MRS. L. SACKETT,
Committee.

FANCY ARTICLES.

The Committee appointed to award premiums on fancy articles, respectfully report that they have examined the various articles on exhibition in this department, and have awarded

Mrs. Doty, for 6 best specimens of needle work,	$1 00
Miss H. Smith, for 2 specimens,	50
Miss S. Smith, for worked collar and sleeves,	25
Miss S. Van Brunt, for ornamental embroidery,	75
Mrs. Dr. Adams, for best lamp mat,	25

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Mrs. L. S. Stevens, for ottoman cover, raised worsted work,	$0 50
Mrs. Mary C. Rauch, " "	25
Elizabeth Gregg, 1 pair crochet toilet mats,	25
Mrs. Manning, 1 pair gaiters,	50
E. L. Clarke, for embroidered suit for child,	50
Mary L. Brigham, for shell work, first premium,	37
Blanche Harris, for shell work, second prem.,	25
Mrs. G. T. Gilbert, for best net tidy,	25
Elizabeth Gregg, for best knit tidy,	25
Mrs. A. D. Anderson, for best mosaic work,	25
Phebe Lawrence, for best bouquet paper flowers,	25

MRS. E. M. LANDON,
MRS. M. PAULDING,
MISS S. LATSHAW,
MISS E. VAN BRUNT,
Committee.

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FIELD CROPS.

The Committee on Field Crops, beg leave to report that we have examined the several statements submitted to us, and award as follows:

S. M. Bartlett, 1st prem., on 3 acres corn,	$4 00
S. Miller, " " oats,	3 00
H. B. Hurd, 2d premium on 3 acres oats,	2 00
R. Nims, 1st prem., 5 acres wheat,	4 00
Henry Smith, best acre grass,	2 00
J. Burch, 2d best "	1 00
R. P. Ingersoll, best ½ acre beans,	2 00

J. BURCH,
M. TRACY,
E. HOTCHKISS,
Committee.

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AGRICULTURAL IMPLEMENTS.

The Committee on Agricultural and other implements, have performed the duty assigned them, and report that but few articles were presented for their consideration. Those, however, on the ground, are

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mostly of good workmanship, and so far as we can judge, such as would prove satisfactory on being tried. The Committee awarded to—

Wm. Dunbar, best lumber waggon,	$4 00
J. B. Wakefield, best buggy,	3 00
Wilkinson, best plow,	3 00
J. H. Rauch, best scraper,	1 00
E. B. Root, best straw cutter,	1 00
" " grain cradle,	1 00
" " horse rake,	1 00
R. Nims, best churn,	1 00
J. H. Rauch, best corn sheller,	1 00
P. Loose, best cider mill,	1 00

G. WILLARD,
WM. HITCHINS,
S. W. EATON,
Committee.

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THE DAIRY.

This is destined to be an important branch of industry in this County. Already we believe the butter made here is of the very best quality, and is not excelled by that of any other County in the State. The samples presented at the recent Fair would be pronounced in the eastern markets equal to the best made in the older States. But why is the manufacture of cheese so much neglected? This mostly comes from Buffalo, and is made at Hamburgh, near that city. This should not be the case in such a County as Monroe. The Committee on the products of the dairy, or those of them who acted, awarded premiums as follows:

Mrs. H. Chittenden, butter,	$2 00
Mrs. L. Sackett, "	1 75
Mrs. G. Graham, "	1 50
Mrs. Doty, "	1 25
Mrs. Knight, "	1 00

GRAIN, FRUIT, AND VEGETABLES.

The undersigned Committee, awarded as follows:

J. M. McKay, best bushel seed wheat,	$1 00
R. Nims, 2d " "	50

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S. Miller, best bushel ears corn,	$0 50
S. M. Bartlett, 2d " "	25
H. Smith, best bushel winter apples,	1 00
Unknown, 2d " "	75
S. M. Bartlett, best 10 varieties apples,	50
J. D. Babcock, best white beans,	50
J. M. Hall, 2d " "	25
M. Hurd, best bushel potatoes,	50
W. Dunbar, 2d " "	37
P. Roberts, 3d " "	25
A. Gay, best bushel onions,	50
P. Roberts, 2d " "	25
P. Roberts best bushel beets,	37
J. Kinnear 2d " "	25
J. Kinnear, best carrots,	37
H. Smith, best pumpkins,	25
J. D. Babcock, best 10 varieties, 6 apples each,	50
H. Chittenden, 2d " " "	25
Mrs. Haskell, best assortment garden vegetables,	1 00
P. Roberts, 2d " " "	50
H. Smith, best quinces,	50
J. M. McKay, 2d "	25
L. Harvey, best sweet potatoes,	50
Unknown, 2d " "	25

The Committee would also cordially recommend one dollar premium on a bushel of grass seed presented; and another on winter pears; also one on choice cabbages presented.

A. W. POTTER, *Chairman.*

OXEN AND STEERS.

The Committee on oxen and steers, award as follows:

R. Potter, best pair 4 year old steers,	$3 00
R. Hendershot, 2d best pair 4 year old steers,	2 00
L. Sackett, best pair 3 year old steers,	3 00
R. Nims, 2d " " "	2 00

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H. Chittenden, best pair 1 year old steers, ... $2 00
R. Hendershot, 2d " " " 1 00

P. LATSHAW,
R. HENDERSHOT,
M. HURD,
Committee.

The committee on other neat cattle, take occasion to remark, after carefully examining the different classes of cattle coming under their observation, that there has been a very marked improvement over those exhibited in previous years, especially in blooded cattle.

G. Graham, 1st premium on Durham bull, ... $4 00
H. Chittenden, 2d " " " 3 00
P. Latshaw, 1st premium on 1 year old bull, ... 3 00
S. Goodale, 2d " " " 2 00
J. R. Grosvenor, 1st premium on Devon, ... 4 00
S. M. Bartlett, 2d " " 3 00
J. R. Grosvenor, 1st premium on heifer, ... 2 00
" 2d " " 1 00
S. M. Bartlett, 1st " " calf, Durham, ... 2 00
I. Russel, 1st premium on cross blood bull, recommended.
E. Adams, 2d " " "
G. Graham, best Durham heifer, ... 2 00
" 2d " 1 00
P. Latshaw, 1st premium, cow, ... 2 00
Ingersoll, 2d " " 1 00
J. P. Grosvenor, 1st premium, 2 year old Grade heifer, ... 2 00
R. Hendershot, 2d " " " 1 00
" 1st 1 year old, recommended.
J. Mulholland, 2d premium "
R. P. Ingersoll, 1st premium, Grade bull calf, ... 2 00
Jas. Mulholland, 2d " " 1 00
Mrs. Canady, 1st premium, Grade heifer calf, ... 2 00
R. Nims, 2d " " " 1 00

W. WING,
R. P. INGESOLL,
W. H. MONTGOMERY,
Committee.

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SHEEP.

The undersigned Committee, report as follows:

J. Doty, 1st premium on buck, fine wool,	$3 00
To No. 2* 2d " " "	2 00
M. Hurd, 1st " ewes,	2 00
" 2d " "	1 00
J. Doty, 1st premium on lambs,	3 00
P. Latshaw, 1st premium on best buck, long wool,	3 00
" " " " lamb, long wool,	3 00
Wm. Knight, 1st premium on ewe lamb,	2 00

G. GRAHAM,
W. ATKINSON,
J. BOYCE,
Committee.

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HORSES.

Committee on horses, class 1st, report the first premium on stallion, $4, Gray Roman, J. B. Wakefield. In the horse we recognize much of the "old Roman;" his firm action, high spirit and admirable symmetry of form, set off to best advantage by a trainable disposition and good training, make him in the opinion of your Committee, the best specimen they have seen of late, of the horse for all work.

The second premium of $3, we award to Frank Johnson. (Wm. Hitchens.) This horse in reality should not have been placed in competition with the "Roman." In his proper class, "the draught horse," (a race of quite as much importance to the farmer,) he stands pre-eminent, showing great power and sufficient activity, combined with firm form and apparent good temper.

Your Committee regret that the Society cannot afford a full list of premiums to each of these classes, as they should never come in competition, as the most showy of the two, is always in such case, placed before his more useful rival.

The first premium of $3, on brood mares, was awarded to Daniel Withington.

The second, of $2, to Jacob Turner.

The first premium on colts, of $2, to Daniel Withington.

The second premium of $1, to Jacob Turner.

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In their decision on this branch of their duty, your Committee were not so certain of doing justice to the intention of the Society, on the competition in this list. After consulting the Executive Committee, they decide that the recognized value of the breeding mare consists only in the excellence of her colts. On this probably true basis, your Committee award the premiums as above. On the appearance and relative value of the mares themselves, the decision would have been very different. There were many fine animals shown in this list, and the numerous colts, show decided gain upon former years.

S. M. BARTLETT,
WM. ATKINSON,
H. C. FURMAN,
Committee.

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OTHER HORSES.

The Committee on three year old, and other horses, report:

E. B. Doty,	1st premium on 3 year old colt,				$2 00
S. A. McIntyre	2d	"	"	"	1 00
P. Conlisk,	1st	"	2	"	2 00
J. Mulholland,	2d	"	"	"	1 00
D. T. Galloway,	1st	"	on yearling	"	2 00
E. B. Doty,	2d	"	"	"	1 00
R. Hendershot,	1st premium on working horses,				4 00
R. Nims,	2d	"	"	"	3 00
H. Hurd,	1st	"	on matched horses,		3 00
G. Willard	2d	"	"	"	2 00
S. M. Bartlett,	1st	"	on matched colts,		2 00
W. Reynolds,	2d	"	"	"	1 00
Wm. Dunlap, best single pony,					2 00
M. Roberts, best stallion pony,					2 00

The Committee noticed a decided improvement in the quality and grade of the yearling colts, over those of three years, and upwards—a gratifying proof of progression in this essential and lucrative portion of agricultural farm stock.

A very superior span of matched carriage horses from Lucas county Ohio, were exhibited on the second day of the Fair. Had they been entered on the first day, they would undoubtedly have taken first class

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premium, agreeably to arrangement made with the Executive Committee, to show stock belonging to Lucas County.

JOHN TULL,
W. P. GALE,
WM. HITCHINS,
Committee.

A very excellent and useful scraper for cleaning furrows, was exhibited by Henry West, which was overlooked for some reason, until after the reports of Committee, were made. They however recommend it to the Executive Committee as worthy of a premium, it being the best article of the kind on the ground.

The report of the Committee on improved farms will be published as soon as it is furnished.

A. J. Kenney, President of the Society, called the attention of the members to the election of officers, when the following were chosen for the ensuing year:

President—HENRY MASON—of Bedford.
Vice President—John Burch—of Monroe.
Secretary—E. G. Morton.
Treasurer—Seba Murphy.

Executive Committee—M. Tracy, J. Little, R. Nims, H. Hurd, L. Darrah.

REPORT OF COMMITTEE ON FARMS.

The Committee appointed to examine Farms, preparatory to the Monroe County Agricultural Fair, respectfully report, that in the discharge of that duty, they have visited several farms in the County; and while we shall, with pleasure, call the attention of our agricultural friends, to the benefit and advantages of a well conducted and well arranged farm, we shall also discharge no less a duty, in noticing the several instances coming under our observation, wherein good farmers do not come up to the desirable standard in husbandry.

The farm of Milo Tracy, (being the only premium farm of the last year,) was the first to be examined. The crop and soil evince a good process of cultivation; fences in good repair, and free from hedge-rows;

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no foul weeds permitted to occupy the corners or waste places; the fields not under immediate cultivation, well seeded with clover; watering places provided for the stock, and various other fixtures facilitating the occupation. Mr. Tracy has not devoted sufficient attention to fruit and shade-trees around his dwelling, two very desirable adornments of a good farm.

We also visited the farm of R. Tolford, in Raisinville, which also exhibited the marks of good cultivation; the fields well arranged and clean, with a thriving young orchard, comprising a choice selection of fruit. The front and back-yards adjacent to the house, well filled with shade and fruit trees, and shrubbery judiciously disposed. There is one feature in the arrangement of the buildings, on the farm of Mr. Tracy, and also of Mr. Tolford, which some of your Committee cannot approve, which is, placing the house and barn on opposite sides of the highway.

Our reasons are numerous, some of which we will briefly enumerate: Firstly, crossing the public thoroughfare in going to and fro, and the constant exposure of that part of the family who perform the offices of the cow-yard and stable, or more plainly speaking, who do the chores. These duties, with most farmers, devolve upon the younger part of the family, who have two gates to pass, and a road to cross, several times each day, in performance of them, making the task somewhat arduous, and should unwieldy bars substitute the place of gates, (as is not unfrequently the case,) really so. Where the barn is placed opposite the house, it is by the same perversion of taste, placed close to the highway, very much exposed to the annoyance of all street depredators, and convenient of access to the vicious and easily tempted.

With farm buildings so situated, the highway is almost sure to be the place of deposit for wagons, carts, plows, harrows, and all the retinue of farming utensils, during the whole year, taxing the safety, convenience and ingenuity of the public, to pass them unharmed, and testing very hardly the forbearance of the mischievous.

While on this subject, and lest it should be said we can tear down more easily than we can build up, we will assign some few reasons for a different, and in our view, more eligible location of farm buildings. And this will depend in some measure upon the locality and facing of the building. With an east or west front, the lane may be made to

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run on the north side, at a convenient distance, back to the yard where the barn should be located, circumstances and locality permitting, in a north-easterly or westerly direction from the dwelling, those being the points from which we have the best prevailing winds during the season when fermentation is most rapid in the barn-yard. The object is, to avoid as much as possible, the effluvia arising, which is not only unpleasant but decidedly unhealthy. With a south front, a lane may be made on either side of the dwelling, as convenience may dictate. A good spacious yard should be reserved around the dwelling, to be appropriated to shade, shrubbery, and fruit of various kinds, in the rear of which, and adjacent to it, should be the cow yard, hog yard, poultry yard, &c., &c., as taste, convenience, or circumstances may require, all accessible to the back yard or lane, and within the supervision of the family, while engaged in the various avocations of household duties. With this arrangement, but one gate is to be passed to obtain access to the several apartments, and should that be a pair of bars, it would not, to say the least, be an aggravation doubly aggravated. The lane should be sufficiently spacious to allow the deposit of all farming utensils, while in active use, and to permit the turning of wheel carriages. Of course, all such articles will or should be housed, when not in use. It is our province to treat of things as we now find them, with the hope that such suggestions as are thrown out may be of advantage to some, who, apparently have begun without any definite plan as to the final arrangement.

Your committee have also visited the farms of Stephen Miller and William Johnson, in Lasalle, on which we find many things in the way of agricultural improvement worthy of commendation. The fences are in good repair, the land clean and the soil well worked, and of superior excellence, a degree of neatness exhibited throughout; however, that degree of excellence has not yet been attained, which in the judgment of your committee would entitle either to a premium. This is an age of progress in agriculture, no less than in any of the avocations of life, and your committee do not feel at liberty to bestow the meed of praise upon what was considered good, in times past—we want additional improvements from year to year, until we, as agriculturists, shall not be excelled by any people. We have a productive, friable soil, a healthy and propitious climate, and a population proverbial for their indomita-

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ble industry and perseverance. By placing our goal sufficiently high, we can attain to that degree of excellence to which we aspire. Entertaining these views, your committee do not feel justified in awarding the first premium. We therefore recommend that Robert Tolford of Raisinville, receive the second premium, and that Milo Tracy of Raisinville receive the third premium, as awarded by the Society.

Respectfully submitted.

WM. H. MONTGOMERY,
SAMUEL M. BARTLETT,
Committee.

As one of the Committee above named, I cannot permit the opportunity to pass, without calling the attention of my brother farmers to improvements now being made on the farm of Samuel M. Bartlett, in Lasalle. Improvements easy and simple in their construction, within the means of every farmer, and of undoubted and lasting benefit. I refer to the system of under-draining, as by him adopted. After describing the process, or "modus operandi," I will endeavor to notice some of the advantages resulting. For all ordinary purposes, the eye is a sufficient leveler, but where there is doubt about the declivity, resort should be had to a spirit or other level. Having ascertained the direction in which the surplus water can the most easily and effectually be disposed of, open a trench so deep as to be below the effect of frost, say from two to three feet deep, as a main trunk; this should be varied in width in accordance with the volume of water it is designed to convey; from sixteen inches to two feet, will answer for quite a heavy flow. Continue the trench through the lower parts of the field to be drained, giving it a gradual rise as you proceed, so that the water may pass off freely but not too rapidly. This done, cut poles of almost any variety of timber the most lasting being the most desirable, which, lay somewhat compactly to the depth of six, eight or ten inches, over which lay a coating of fine brush, and if the soil is sandy, on these a coating of straw or prairie grass, if clay the inverted turf is sufficient, then fill with earth and the drain is finished. Side drains need not be so large, but finished in the same way, observing to have them a little more elevated than the main trunk. This mode of drainage is within the means of every one; it has not the virtue of a patent except it be in the more abundant products realized from a soil, which previously had been next to

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valueless. On a field treated as I have described with under-drainage, Mr. Bartlett has raised this season, the heaviest crops of corn I have seen in the county. The land previously was subject to inundation, cold and unproductive, the soil naturally good, being a clay loam with a clay subsoil; when dry, too hard to plow, and when wet not fit; by draining, it has become one of the most pleasant and desirable of soils. There are hundreds of acres in the County similarly situated, which are sown or planted without expecting to realize much from them; but we do not like to run round a patch, or sag, we therefore put it in, and "trust to Providence;" but Providence seldom smiles on us contrary to our own expectations and against the dictates of reason.

Land so drained will sustain a more severe drought than ordinary good soils; the water settling away soon after heavy rains, leaves the ground loose and porous to a good depth, the roots of plants extend deeper, and the ground not being hard baked, evaporation goes on to much greater depth, and more equally. Another advantage of underdrains, consists in being able to till the whole surface; there is no obstruction of surface ditches, no expense to be incurred annually, in keeping them open, no necessity of finding an odd spell, (which, by the by, is seldom found,) in which to cut the weeds and bushes growing on the borders, and no running the whole length of a field to a crossing place, with the loads of hay or grain raised.

By introducing this system of drainage, a person can advantageously make himself a public benefactor, for he can raise more than two blades of grass, where one or nothing grew before.

It is desirable that the attention of farmers be directed to this mode of improvement, and that hereafter, a suitable premium be awarded for the most thorough and practical system of surface and under-drainage.

Had Mr. Bartlett been a competitor, it is but justice to say, I could have been warranted in disposing of the first premium.

All of which is respectfully submitted.

W. H. MONTGOMERY,
Chairman of Committee on Farms.

The Committee on Swine, report a premium of $2, to J. S. Chapel, for the best sow and pigs; $1 50 for best fatted hog, to A. W. Potter;

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and recommend to the consideration of the public, the Suffolk pigs brought on to the ground by I. R. Grosvernor, Esq.

E. G. MORTON, *Sec'y.*

ANNUAL ADDRESS.

BY I. P. CHRISTIANCY.

Ladies and Gentlemen:

Having been requested to address you, I shall take up none of your time in making apologies. Should I avow my incompetency to give you an address worthy of the occasion, I should only be saying in advance, what you will be sure to discover, without my saying it; and should I take the time to make an adequate apology, I should have little left for saying anything else, and should then need to apologize for having made the apology.

I therefore proceed at once to what I have to say upon the subject which has brought us together. This subject, if I correctly apprehend it, is the subject of labor—the great subject of human industry, its necessity, its nature, its object and its end.

This, in all its bearings, would embrace the history of our race and an exposition of all the arts and sciences, all that has been learned, all that has been accomplished by man. It would be vain to attempt all this in a single address; impossible to accomplish it in a lifetime.

All, therefore, which I shall attempt, will be to show the necessity of human industry, its nature and objects, and to deduce some general laws which apply to and govern it in all its departments, the observance of which is calculated to render labor more conducive to our happiness, and the neglect or violation of which often renders labor valueless or positively hurtful.

The necessity for labor, to a considerable extent, and as a means of self preservation, is common to all animated Nature, and has alike been imposed by our Creator, upon man and upon every living thing which inhabits the earth.

Vegetable life—the tree or the plant, may remain comparatively motionless, and without conscious exertion, draw its support from the earth and the atmosphere; but for the preservation of animal life, some de-

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gree of conscious exertion, of effort, of actual labor, is requisite. The nature and amount of the labor necessary to produce the means of sustaining life, differ greatly among the divers species of animal life; the amount and kind of labor are regulated by, and required for, the gratification of each individual's appetites, passions, and propensities—in other words, its *wants*.

The inferior animals having but the physical or animal appetites, passions and propensities, without the higher passions, emotions and mental faculties given to man, and in a state of Nature, (especially in the early stages of life,) better protected, have a less number and a less variety of wants, consequently a less necessity for labor. The ox, the horse, and most inferior animals, have been kindly clothed by the hand of Omnipotence. The fox digs his tenement in the earth, the bear finds it in the cleft of the rock, or the hollow of the tree; the thicket furnishes shelter to the deer and the buffalo; while the feathered tribes are endowed with means of locomotion which enables them to follow the sun, to taste the enjoyments, and to avoid the inclemencies of every clime. Of these, the wants are few. Their food consisting mostly of the spontaneous productions of the earth, needing no preparation to fit them for their use; for as God did not see fit to give them the mental faculties, or the necessary organs to prepare the food for their stomachs, he has kindly fitted their stomachs to the food. The few faculties which they possess, attain their maturity much earlier than ours. But they do not advance beyond a certain stage; their mode of obtaining subsistence and of constructing their dwellings, is the same to-day as on the day when antiquity began.

Man was by Nature, more naked and defenceless; the earlier years of his life, absolute helplessness; naked, he must be clothed; exposed to the inclemencies of the weather, he must have shelter. Unable, like the ox, to feed upon grass, or (except to a limited extent, or in favored localities,) upon the spontaneous productions of the earth, for him the earth must be cultivated; and even when the earth had brought forth her abundance, her golden harvests were not fitted for his food as they came from the field. Man had been fashioned with a finer mould, a more delicate organization. The grains and fruits of the earth must be subjected to many laborious processes, to fit them for his digestion and sustenance. He was also endowed with a greater variety of appetites,

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passions, aspirations and emotions, the gratification of which, to a certain extent, if not actually necessary to his existence, are at least essential to that fair degree of enjoyment, which alone can render life desirable. All these appetites, passions, aspirations and emotions, were doubtless given to man for good purposes, and to be exercised within certain limits of moderation, for the promotion of his happiness; only becoming evil when allowed to run to excess, or when perverted from their original design. Each, however, is the variety of wants. But while our Creator has subjected man to a greater variety of wants, he has also given him vastly superior powers for the gratification of those wants; not so much superior physical powers, for in these he is inferior to many other animals.

But to enable him to control and direct his appetites, passions and propensities, as well as to procure the means for their proper gratification, man is endowed with intellect—with reason—that spark of Divinity, which enables him to guide and direct his faculties; to control and use the strength of the animal creation; to analyze the substances around him; to investigate the laws of the material universe; to learn the powers of Nature, and the forces of the globe, and to compel all of these to labor for his subsistence and contribute to his enjoyment. But here is another species of labor; the labor of the mind, the cultivation of the intellect, and its application to producing a supply for human wants —a species of labor not less essential, not less arduous, intense and exhausting, not less productive than the physical labor of wielding the axe or turning the sod.

And here again, in accordance with that benevolent design to be read in all His works, the Great Architect has given to all His creatures the necessary and appropriate organs, powers and faculties, to perform all the labor incident to their condition, and necessary to a proper gratification of all their wants.

And throughout all animated Nature, every organ, every bone, every joint, nerve and muscle—every faculty, passion and emotion of the mind—has been admirably fitted and adapted to the specific labor which it has to perform; not one is without its peculiar use. Nay, the proper exercise of all is necessary to any tolerably healthy state of each individual existence. Deprive the bird of the use of its wings, or man of the exercise of his body or his limbs, and

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the health and vigor of the individual begins to decay; the mind without due exercise, also loses its power.

If, therefore, there is one injunction of the Almighty more obligatory, or more legibly written upon all His works than any other, it is the command to LABOR. It is stamped in letters of light, in language intelligible to every eye, upon every living, breathing thing, from the meanest insect to the highest form of created being, as a *primary law of his existence.* It is not even confined to His creatures, but throughout the earth and the heavens, the sun, the planetary system and the numberless worlds scattered through infinite space, created, upheld and kept in motion by His power; the ceaseless activity which prevails proves that labor is an essential *attribute* of God Himself.

Who, then, should be ashamed to labor. He only who is ashamed of his Maker—ashamed of his own existence. Let him hide his head and rid himself and others of the burden of his existence; for while he impiously assumes to be above his Creator, he is beneath the vilest insect that crawls—a living libel upon his Maker, a hideous excrescence upon the fair face of Nature which he deforms and defiles by his presence. In all the universe of God there is no *proper* place for such a being.

Human wants, then, constitute the necessity for human labor; and these being, as society advances and population increases, almost infinite, the kinds of labor necessary for supplying these wants, become as various as the wants to be supplied.

But the true and only legitimate object of all human labor is to add to the aggregate of human happiness. All labor which has this tendency is useful and honorable; that which has not is useless, and (as it is a waste of time which ought to be otherwise employed) is dishonorable. I say all labor which tends to increase the *aggregate* of human happiness; not all that which may tend to the momentary enjoyment of the individual, or of a particular class, and the sacrifice of the rights or the enjoyments of others. A man may labor as hard to rob or defraud you of the fruits of your labor as he would in producing an equal amount of property by legitimate labor; but this tends in two ways to lessen the aggregate of human enjoyment; first, by depriving you of the reward of your industry, and secondly, by wasting in these unjust depredations, the time which should have been employed in produ-

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cing for himself. Those branches of labor, therefore, only are legitimate which leave to every other individual an equal right to the performance of the same labor, and the enjoyment of its fruits. And though despotism in all its forms, whether spiritual or temporal, and by any and every appliance of deceit, force or fraud—by its standing armies, by its hosts of officials, its police or its spies—by all the efforts which it can make to keep the people ignorant and degraded—may expend as much labor, physical and mental, as would suffice, if turned to production, to supply the wants of all its subjects; yet the tendency of all such labor is to diminish the aggregate of human enjoyment, as it tends to rob the *many* for the support of the *few*, and actually perverts the labor of its subjects to the production of want, destitution and misery, taking a large class of the population from useful labor, and enabling them, often compelling them, to live upon the labors of the rest.

Labor, as I have already stated, is of two classes or kinds; first, physical or bodily labor; and second, mental labor, or the labor of the intellect. But to produce any definite or useful results, these must be more or less combined. Without the aid of the intellect to some extent, all physical human labor would be thrown away—the mere exertion of idiotic force. And on the other hand, without the aid of physical labor to grapple with matter and to apply to it the discoveries of science, the grandest efforts of the intellect, the most stupendous discoveries of science, would be equally abortive. No amount of physical strength could force the metals from their native ores; and without physical labor, the genius of Franklin or Fulton would have been wasted upon castles in the air.

Hence, labor is found to be productive in proportion to the degree of intelligence by which it is aided and directed. To accomplish any given result, man must first know the means, and how and where to direct his efforts. This knowledge is not intuitive, but is all to be acquired; there are but two ways of acquiring this knowledge; first, by our own personal observation and experience; secondly, by availing ourselves of the observation and experience of others. If every individual were confined to his own observation and experience, without the ability to avail himself of the observation and experience of others, it is obvious there could be no such thing as general increase of knowledge or progressive advancement of the race. Great as might be the knowledge

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which any individual might attain, valuable as might be the discoveries he had made, if he could not impart his knowledge to others, it must die with him; and each successive generation must pass through the same tedious routine without advance or improvement, like "the beasts that perish."

It is only then, by the power of availing himself of the observation and experience, the ideas and the knowledge of others, that man is enabled to rise from a state of savage ignorance and imbecility. Hence, it will be found that every nation, ancient or modern, has advanced in civilization and improvement, in the production of the necessaries and comforts of life, and been able to triumph over its neighbors, in proportion to the facilities which it has contrived or possessed, for imparting and transmitting knowledge from one person to another, and from one generation to another.

Every science is formed, every law of Nature ascertained, by the observation of, and reflection upon a multitude of particular facts, from which some general law can be deduced. The necessary number and variety of facts cannot all be observed and collected by the same person; time also is necessary; they must be collected, accumulated, embodied and classified; and this (especially in early and less enlightened times) required their transmission from one generation to another, and often for a long course of ages, before the necessary amount of materials could be furnished for the construction of science.

Among the most favored of ancient nations, the means of collecting, preserving and transmitting ideas, were exceedingly limited. The art of writing, alone, though a great advance, was but an imperfect means of imparting and transmitting knowledge, and entirely inadequate to its dissemination among the people. The great masses of the people, owing to the low state of the arts and sciences, and the almost entire absence of machinery, were compelled to produce all the necessaries of life by direct labor. Little time was left them for the study of manuscripts. The necessary consequence was, that very few, except the opulent or powerful, ever obtained the art of reading; and owing to the great expense of multiplying written copies, fewer still could obtain the books or materials. Knowledge was therefore, of necessity, confined to the few, who were thus enabled to deceive, degrade and oppress the masses, and to live upon their earnings, an advantage, (such is the melancholy history of our race,) that power has too seldom scrupled to use.

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Again, when years of labor and millions of money had been expended in collecting a library of manuscripts, a great fire, an insurrection, or an irruption of barbarians or religious bigots, might destroy in a day, the accumulated wisdom of past ages. But by the invention of printing, all such accidents have been set at defiance. Every new discovery, every invention, every fact, every thought worthy of being remembered, once committed to writing and finding its way to the press, becomes fixed and imperishable, is multiplied at a mere nominal cost by innumerable copies, and scattered upon the wings of the wind, into every region, where man finds a dwelling place upon the earth—read, reflected upon by millions, exciting new ideas, leading to new discoveries, which again finding their way to the press, pass on in endless succession and progression. And thus each new discovery or invention leads to many others, of which the original inventor never dreamed. One suggests a new idea, crude and imperfect it may be at first, as most new ideas must be; another reflects upon it, renders it more tangible; another gives it form and shape, in the invention of some new machine for the saving of labor; another improves or perfects it, or from observation of it and reflection upon it, strikes out a new principle of greater value, which perhaps supercedes the whole.

In this manner, the face of the world, and the condition of society have been changed, and are still rapidly changing for the better. Each has or may have the benefit of all the accumulated knowledge, which all the past has been able to transmit to our time; and thus, even the buried generations of the past continue to labor for us, and contribute by their labor to our support and enjoyment.

Where the earth upon a given surface, in former times could only support its thousands, by the improvement in the arts of production, it now maintains its millions. But more advancement has been made in the arts of life, since the invention of printing, than in all the uncounted ages which had gone before; and more within the last century than the thirty centuries which preceded; and yet from the accelerated rapidity with which one invention or discovery follows another, we may reasonably infer, that human science is yet in its infancy, and that posterity will look back upon the ignorance of our age, as we look back upon the ignorance of the past. You are now here furnishing the materials for science, the elements for further improvement, by bringing together

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and exhibiting to each other, specimens of your various productions, in agriculture, in manufactures, in labor saving machinery—in the mode of rearing and improving stock, suggesting and receiving ideas of further improvement, and giving to each in a tangible form, the benefit of the observation and experience of all.

Without going into the discussion of all these various improvements, let me illustrate the principle upon which improvements in machinery operate for the general benefit of the masses—and the same will apply with equal truth to the various discoveries in chemistry, and other natural sciences. You have a certain amount of labor to perform in any branch of business, say in the raising of wheat, or the manufacture of cloth; to do that labor by hand, or the method formerly in use, would require the labor of twenty men for a given period of time. Now some enthusiast, some projector—(for those who think intensely enough upon any subject to make improvements or to discover a new principle, or have the courage to defy the arbitrary formulas of the public opinion of the time, are very generally looked upon by the less thinking masses as half insane,)—some such projector constructs for you a machine, which, with the labor of a single man, will do all the work of the twenty men. Here you save the labor of nineteen men, less the cost of the machine; you can produce twenty times as much with the same labor, or the same amount of product with one-twentieth of that labor; the labor of nineteen men has been set free to be engaged in some other useful production; you can sell your wheat or your cloth at a much less price, and all who use wheat or cloth can obtain it with so much less of their labor; and so on, through all the departments and occupations of life.

By such processes as these, articles of necessity or comfort, before attainable only by the rich, are now brought within the means of the poorest; and as the same amount of the necessaries and conveniences of life is produced with less labor and in less time, each individual can now devote a larger portion of his time to mental labor, to the acquisition of knowledge, which again leads to further improvement in the arts of life, in labor saving processes and machinery, and so onward with accelerated velocity, and to an indefinite extent. I have not the time, nor is it necessary to particularize the various inventions which tend to produce such results—such is the tendency of all. But the in-

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vention of the steam engine alone, and its application to the various branches of industry—is daily performing more labor, and producing more of the necessaries and comforts of life, than the physical labor of any twenty millions of men and forty millions of horses upon the face of the earth, and setting free that proportion of human labor and time, to be devoted to the cultivation of the intellect, or to other branches of production. Its effects, like that of almost all inventions, are universal, benefitting, if not alike, yet to a very great extent, every department of industry, and all classes of men. But take for example, the farmer in the interior of any of the north-western States, (or of any of the States:) but for the steamboat and the locomotive, his wheat might be worth from 37 to 50 cents per bushel, his corn from a shilling to 18 cents; the steam engine has doubled these prices; the farmer can therefore obtain double the necessaries and conveniences of life with the same amount of labor. It has also lessened the price of all the products of other countries imported to this, and of almost all the goods used by the farmers, almost in a like proportion. So that the inventors of the steam engine—the Marquis of Worcester, who first conceived the crude idea—Savary, who first constructed a crude engine—Newcomen & Cawley, who improved, and Watt, who perfected its principle, Fulton, who improved its details and first applied it as a means of locomotion—these men, long since in their graves, are even now performing for the farmers of our country one-half their labor, and a very large proportion of the labor of every department of life. Nay, they have peopled the wilderness, built up cities and created States, where, but for their labors, the wild beast and the savage would still have been roaming through their native wilds.

Another law of human labor—for I can only touch a few main principles. It is not necessary, neither is it possible for any member of society in an advanced stage of civilization, to acquire a knowledge of all the sciences and arts, nor to perform for himself all the branches of physical labor, necessary to the supply of his wants. This will be evident to every one the moment he considers his own wants, and the manner in which they are supplied; how many of the arts and sciences of which he is ignorant, how many branches of labor which he is powerless to perform, how many productions from countries which he never saw, are all brought into requisition, for the supply of his most ordi-

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nary wants? Try the experiment for a moment; determine to forego all benefits of the labor of others, mental and physical; a moment's consideration will satisfy you that you must at once go back to the lowest possible stage of savage life. To say nothing of food, take the article of clothing, and one of the simplest of the kind, boots and shoes. Can you kill the animal for his hide? perhaps, with a club or a stone; can you take off the hide? possibly with a stone or sharp stick. Will you tan the leather? first construct your vat; for this you want the labor, or at least the tools of the joiner; but these are of iron or steel; you must stop your mechanical operations for a time; you must find the ore, acquaint yourself by your own unaided experiments, with chemistry and metallurgy. Construct your furnace and your forge for the working of your ore; you are in a dilemma; you have no iron to begin with, if you knew how. We are not yet half through with the process; and yet you perceive that more than one lifetime—yes, more than ten in succession, must have been spent in getting thus far, (to say nothing of labor of procuring food,) and your feet are yet bare. You may say then, I will go without shoes, or use the untanned hide. So does the savage.

You may take any other article of clothing, and most articles of food, or the construction of your dwellings; run through the like process, and you will find, if you determine to live upon your own labor, rejecting that of others, you are brought directly back, not only to savage life, but to the lowest possible stage of it—that, in fact, men could not exist at all, except in some favored locality—that, in this manner, the earth could never sustain a dense population. Even the American savages had made more advance than this; and yet the whole area of the United States could support but a few hundred thousand Indians, while it is capable of sustaining as many hundred millions, in civilized life.

These considerations show the necessity of the division of labor, physical and mental, into various branches or departments, by which each, adopting that branch, or those branches peculiarly fitted to his faculties, acquires, in time, a degree of knowledge or dexterity in his particular profession or occupation, which enables each to produce ten or a hundred fold greater result, in that particular department. Thus enabling those of one trade or occupation to produce ten fold more of the article

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wanted by another, and that other, ten fold more of what is wanted by the first, giving rise to an exchange, mutually and highly beneficial to, and increasing ten-fold, the aggregate production of all, and binding those of every profession, every trade, every branch of industry, in one common brotherhood, each equally benefitted by the labors, and interested in the prosperity of all. So long as all departments of labor are left equally and entirely free, to keep up a generous rivalry with each other, for the common benefit, there is no more cause for envy, hatred or jealousy, than between the different organs or members of the same human body; but if one be fostered and encouraged by the laws, or by a vitiated or public opinion, treated as more honorable, while another is discouraged by the laws, loaded with burdens, or treated by society as dishonorable, the effect cannot be otherwise than disastrous to the community at large, The like principle applies to all commerce between different or distant parts of the earth. The tropics, for instance, supply spontaneously, or with little labor, many of the articles, which, however necessary, cannot be produced in the temperate zones at all, or only at a ruinous expense; while, with the productions of the temperate zones, the case is precisely reversed. Some countries are better adapted to agriculture, others to manufactures. Commerce, navigation, transportation, effect the exchange, and give to all the advantages of each. Why should governments, by a selfish but mistaken policy, throwing burdens upon one branch, and encouraging another, diminish the benefits of this mutual exchange? They do so, however, under the pretence of regulating commerce; as well might they attempt to regulate the seasons, to regulate the winds, to regulate the wants or the fancies of men. Commerce can only be regulated for the common interest, by the constantly changing interest of the people—by the supply and demand. Legislation cannot regulate, but it may injure or destroy it.

All departments of labor, whose object and tendency is to increase the aggregate of human happiness, are necessary; all are equally honorable. That these views are correct as to the various branches of physical labor, few would deny. Its effects are immediate and obvious to every comprehension—but the man of physical labor often conceives a prejudice against the man of mental labor; because the beneficial results of the latter are not so immediately visible. A very little reflec-

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tion however, will satisfy him that the same views apply equally to the various departments of mental labor—that these are equally necessary, equally productive. The human body is a most delicately constructed and complicated piece of mechanism; it is liable to numberless modes of derangement, or in other words, diseases, almost infinitely varied in type and intensity, and running into and blending with each other. To cure these diseases, the nature of the human system, the peculiar characteristics of each disease, must be known; the effects of the various kinds of medicines must also be ascertained. Here, at once, is the study of a lifetime, a demand for the knowledge which could only be acquired through the observation of many successive generations. This knowledge is supplied, this labor performed, by your physician.

Such is the tendency of human passions and propensities to run to excess, to lead to wrong and violence, and so liable are men, even with the best intentions, to misunderstand each other, or to comprehend in a different light the same transaction, that every community, as it emerges from barbarism, (where force alone prevails,) must have fixed laws for the protection of right and for the redress of wrongs. And as in civilized society, business transactions become almost infinitely various and complicated, (and the more various and complicated in proportion as civilization advances,) the laws become various and complicated, because the transactions to which they apply are so. Here again is the necessity for years of study, to ascertain the nature of these various transactions, their relation to each other and the rights of parties, or the law applicable to each. This is supplied by the lawyer.

To correct the natural tendency of the passions to excess, to vice and wickedness; to soften their asperities, to teach men to love justice and mercy for their own sake, and in accordance with the will of their Creator—to make men better in all the relations of life—we have the moralist and the clergyman. All these professions may be abused, and so may every department of labor, every faculty of the mind. The physician may keep a patient sick, the lawyer may stir up litigation, for the sake of business or a fee; the clergyman may become a wolf in sheep's clothing, and for selfish purposes, stir up hatred and bigotry, instead of peace and good will, and shear the flock instead of feeding them. But these, I trust, are the exceptions, not the rule. If the efforts of professional men are honestly directed to the legitimate duties of their pro-

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fession, their efforts are equally as productive of human happiness as any other department of labor among men.

Even those studies which seem most remote from anything practical, are often productive of grand and beneficial results. Look at yonder astronomer, peering through his long telescope into the clear evening sky. He gazes for a few moments, withdraws his eye, makes a note upon a paper by his side, and then turning to another part of the heavens, repeats a similar operation. Surely, you will say, this is mere star-gazing; he might as well be forming fanciful figures in the clouds. He may be pleasantly indulging his imagination, but can do no practical good. But be not too hasty in your conclusions. That same star-gazing of his, will do the world more practical good than he could accomplish in cultivating the soil for a thousand years, should he live so long. He is a co-laborer with you in ministering to human wants. That star-gazer is cheapening the price of food and clothing; enabling you to obtain with less labor a greater amount of the comforts of life. He has been observing the motion of the moon with reference to certain fixed stars; he has been watching the motions of Jupiter's Sattellites, discovering and preparing to demonstrate a rule which shall enable your navigator to determine his longitude; converting the celestial luminaries into so many beacons, to guide him across the trackless waters, and to know his precise locality upon the great deep, thereby adding to the safety and speed of navigation, diminishing the cost of transportation, lessening the price of foreign productions to you, and creating a greater demand, and giving you a higher price for yours, in return.

I have already said that perfect health of body and mind, requires a proper, and I may also add, a proportionate degree of the exercise of both. And though we enjoy the benefit of the experience which has been accumulated in the past—though great advances have been made in the arts of production, and even the poor in this age, and especially in this country, are in the daily enjoyment of many of the comforts and conveniences of life, which among the most enlightened nations of antiquity, were absolutely unattainable by the rich and powerful—yet up to this time, and even in this favored land, the masses of our population are yet compelled to devote more of their time and faculties to physical labor, than is consistent with a due and pro-

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portionate exercise and development of the mind. But notwithstanding human wants seem to multiply with the means of their gratification, and what were first luxuries, next matters of ordinary convenience and comfort, finally come to be considered indispensable necessaries of life—yet it cannot be denied that the rapid improvement in the arts of production, has outstripped and is still rapidly outstripping this tendency of our nature. And from the wonderful impetus which the few last years have given to the progress of improvement in all the arts and sciences, discovery following discovery, and invention succeeding invention with ever increasing velocity, it might not appear entirely Utopian to predict that the time will yet arrive, when the improvements in labor saving machinery and improved processes of production will have reached that stage of perfection, that even the poorest of our population may be able to obtain the necessaries and conveniencies of life, without devoting more of their time to physical labor, than is requisite for their physical health—when the necessity for labor will be regulated by the necessity for exercise; when the cultivation of the intellect will form the business, and physical labor, the recreation of life.

This would be the highest state of mere human perfection and earthly happiness of which our nature is susceptible. All that could then be required of further invention and discovery, of further improvement in the arts and sciences, would be so to multiply the productions of industry, as to keep pace with the increase of population. But if such a state of perfection is ever to be reached, it assuredly will not be by always looking behind us, by studying the ancients, and by clinging to the ideas of past ages. In everything which pertains to the arts of production, or to the comforts of life—in everything which can contribute to the progress of man, the study of antiquity is the study of the childhood of the race. It has been said with truth, that Cæsar, in the height of his power, had neither glass to his windows, nor a shirt to his back. But this gives but an imperfect idea of the deficiencies of that most enlightened period of antiquity. Neither power nor wealth could obtain powder to blast the rock, nor fire arms for hunting or defence; a watch to tell the hour, nor a compass to survey their lands, or guide their mariners over the deep. No telescope had revealed to them the wonders or the regularity of the solar system, or enabled them, like the moderns, to convert the heavens into a clock. They navigated their

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ships principally with oars, and seldom ventured from sight of land; plowed their lands with a wooden wedge or a crooked stick, with oxen harnessed by the horns; reduced their grain to flour, principally with the pestle or the hand-mill. They had neither cotton factories nor woolen factories, nor any other machinery worthy of the name. The few manufactures which they possessed were the result of hand labor and the rudest of instruments. Even those (to us) indispensable articles, pins, were invented but little over 300 years ago, and the common sewing needle was unknown in England until the reign of Queen Mary.

Nay, it may be said the only branch of manufactures which seemed to flourish in the ages of classic antiquity, was the manufacture of their gods. These could always be made to order. Great was Diana of the Ephesians.

The ancients lived in a different world from ours. They had but four elements, or simple substances, while we have some fifty-eight. Their elements were earth, air, fire and water, neither of which is an element now. To them the earth was flat and stationary, of indefinite length from East to West, but of limited breadth from North to South; while the sun, moon and stars, fastened to the firmament like so many brass buttons, moved around it. Pythagoras had once attempted to set the earth in motion; but the people of his day were opposed to the agitation, and it seems never to have got fairly under way till Copernicus, (a little over 300 years ago,) and after Galileo gave it a helping hand. But even then, its motion was prohibited, and Copernicus and Galileo imprisoned by the Pope. Fortunately, however, by the aid of the printing press, the earth proved too strong for the Pope's bull, and has kept on its way ever since.

But the press has never been forgiven for this offence, and (in countries subject to his influence) is still looked upon with suspicion, and kept under the strict supervision of the police. Not only did they live in a different world, but man himself was a different being. We have the concurrent testimony of all the learned physicians of those times that the blood never circulated in their veins or arteries, till about 200 years ago; and Harvey, who first announced its circulation, was denounced by those learned physicians as a quack and an impostor.

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But while the ancients were thus ignorant of the actual existences around them; while they were unable to discover the circulation of the blood in their own veins, they nevertheless far exceeded the moderns in the extent and intimacy of their acquaintance with the supernatural, the mysterious and the miraculous. Their astrologers, (if we are to believe them,) could read the fate of each individual in the star or planet which presided over his birth; their priesthood could foretell the destiny of nations, from the entrails of victims, the flight of birds, or the appearance of a comet. Many of the virtues, and each of the vices, had its peculiar deity. The earth and the air swarmed with gods and demons, who often conversed with men, and frequently submitted to their will. And according to the concurrent testimony of the divines of those days, through all the middle ages, and down to the middle of the 15th century, good and evil spirits, not unfrequently appeared to men, and what was more fortunate, by the use of certain charms or talismans, the performance of certain ceremonies, and especially by the repetition of a certain form of words in the Latin tongue, they were easily rendered obedient to the will of man; and various other miracles were of frequent and public occurrence.

But unfortunately, and as a proof that the human mind is of limited capacity, while the moderns have made rapid improvement in the natural sciences, their knowledge of the supernatural has wonderfully declined. The valuable sciences of alchemy, astrology and demonology, have become extinct. The invention of the printing press seems to have withered them at a breath. Ghosts seem also to have taken the alarm, and all, except a few of the more courageous, to have shrunk back as at the approach of the rising sun. The witches, more disposed to contest the field, maintained a short and sickly existence in Europe, fled to New England, and yielded up their art and their lives upon the scaffold. And the power of working miracles, once so common, as often to be exhibited in public, and even upon the stage, is found to be rapidly declining, and now we only hear of it at long intervals, exhibited to a select few, in some obscure corner, some impenetrable fastness of the mountains, where the press has seldom found access.

The very existence of the press would seem to be incompatible with any flourishing state of the supernatural sciences, (?) unless it can be kept exclusively under the control of those whose mission it is to propagate them.

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It is not then, by the study of the ancients, that any advance is to be made in the natural sciences, or in the arts of production. The ancient languages would not furnish even the names of many of the principles, processes, implements and machinery now in daily use. A power press, the mariner's compass, or the electric telegraph, would be incomprehensible to Pythagoras and to Cicero. Aristotle would take refuge from such enigmas under his favorite syllogism. The most perfect acquaintance with the Greek and Latin classics cannot contribute a single idea, which can tend to advancement in any of the useful or material sciences, or in any of the arts for supplying human wants. He who looks to that source for any such ideas, looks in vain. As well might the chemist seek to perfect himself in chemistry, or Fulton to have produced a steamboat, by playing pins or marbles with a lot of idle boys, or by listening to the dreams of a love-sick swain. Doubtless, the intellect was as vigorous in ancient, as in modern times; the imagination much more so; for ignorance of facts, is necessary to the full play of a fervid imagination. In poetry, they have never been equalled; in moral philosophy, perhaps seldom excelled; for the great principles of right and wrong, are generally sufficiently obvious, however constantly violated. But they had not collected the materials for the construction of material sciences, and their puerile ideas of theology are simply disgusting.

I would not discountenance the acquisition of the Greek and Latin languages by those who are to become professional men, or to devote their lives to literary pursuits. The Latin is a great help to the acquisition of several modern languages, and even to a perfect understanding of our own. But I would not permit the classics to usurp the place of the natural sciences, or to consume the time which should be employed in the acquisition of facts. This, I am satisfied, has been and still is the case in most of our Universities. I am well satisfied that the progress of the human race has been greatly retarded by attaching an undue importance to a knowledge of the classics—by giving more importance to words than to ideas—by treating everything as the perfection of wisdom which happens to have been written in ancient times and in a dead language, while much (I may say most) of it, if turned into plain English would appear like the merest nonsense. Why is it any the less so when clothed in Latin or Greek?

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Will you refer us to the writings of the ancients as the standard of human wisdom? Then to give us your *beau ideal* of the human countenance, present us a mummy from the Egyptian catacombs.

I speak not of spiritual matters nor of what pertains to the welfare of man in a future and higher state of existence; and though I freely admit that these subjects have superior claims to your attention, they are not within my province. I must confine myself, for the present, to a humbler sphere—to matters which pertain to the material welfare of our race—to the contemplation of facts and the stern realities of every day life. And for the promotion of these material interests and improvement in the arts of production, we must look mainly to the natural sciences. And here I have a word to say to the farmers. I shall not flatter; truth is more important, though sometimes less grateful than flattery. While agriculture was the earliest, is the most indispensable, and the most important branch of human industry, as well from the numbers engaged in it, as from the fact that every other branch is dependent upon it—yet truth compels me to say, its principles are least understood by the great mass of those devoted to its pursuit. It has profited less by the experience of the past, and the discoveries and improvements of the present, and is far behind every other department of industry in the general march of improvement. The principal improvements which have taken place in agriculture, and of which farmers generally have availed themselves, are those contributed by other departments of industry, mechanical inventions, and improvements in the tools and implements with which the mere mechanical labor of agriculture is performed. The farmers have not elevated agriculture to a science by the study of its principles. They have depended too much upon chance, upon conjecture and unsystematic observation and experiment; neglecting the first principles upon which agriculture, as a science, is based—the nature and chemical constituents of the soil, the chemical composition of plants, and the nature and principles of vegetable growth. Some, it is true, have made themselves acquainted with these first principles, and are reaping the benefit, in increased production of crops, and improved fertility of their soils; and it is a cheering sign of the times, that this species of knowledge is beginning to be appreciated. To elevate agriculture to the dignity of a science, it is essential to know, first, the chemical constituents of the vegetable which

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you wish to produce: this you will find ready furnished, and in an intelligible form, in almost any modern work on agricultural chemistry. Next, it is necessary to know the chemical constituents of your soil, for if the constituents required for any particular plant are not in the soil, you sow your seed in vain. For want of this knowledge much labor is often thrown away, even in the attempt to enrich the soil, for the manure which will enrich a soil deficient in one constituent, would positively injure another soil having this constituent in excess. To cultivate the soil and to undertake the raising of crops, without a knowledge of the chemical qualities of the various soils, is but a chance operation. It may succeed, especially in our new and rich soils, which, fortunately, for the present, have generally a rich supply of most of the elements necessary to the growth of any class of vegetables; but even with these soils, much is lost by ignorance of the chemical properties of the soil. Should a man undertake the occupation of a dyer of cloth, and without a knowledge of the chemical qualities of the materials of his dyes, their effect upon each other, or the combined result, should, for the purpose of producing a particular color, throw all his coloring materials into one kettle, thrust in his cloth, and trust to chance for his color, he might, it is true, produce a color, but it is also true, it might not be the color he sought to obtain. And if farmers will act upon the same principle, they must not be surprised, if, when they sow wheat, they should reap chess. Such is the perfection of chemical science at this day, that almost every practical farmer might easily qualify himself for a chemical analysis of his soil. But if they think themselves too old to begin, let them at least give to their sons an opportunity for acquiring this knowledge. Let it be made a part of their education. The State, with a wise forethought, has liberally provided the means, by providing for the establishment of an agricultural school.

And if the importance of any branch of education is to be determined by the good likely to be accomplished, this school, if properly patronized and properly conducted, may yet rival, if it does not surpass, the University itself.

I did intend to have discussed some other topics, but I have unconsciously been led into greater polixity than I intended. I did wish to have touched upon the various prejudices against labor, which prevail and have become fashionable in some parts of our Republic, and to some

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little extent, perhaps, even in our own cities, among certain classes who have been rather roughly, perhaps, but not inappropriately, styled the "Codfish aristocracy of Democracy;" to have held them up to a well merited contempt; to have traced them through their vicious system of education—their various rounds of dissipation; and to have shown that while they consider honest labor dishonorable, they actually labor harder in everything which is dishonorable, and enjoy less of life, than the honest laborer.

I intended to have followed some of them to the gambling table—to their other haunts of vice, to the dram shop, and—just one door beyond—to the State Prison, where many of them are compelled to labor at last. I intended to pursue them through the various stages of their wearisome and worthless existence, disease and premature decay, to dishonorable graves; to have shown that those who despise labor do not live out half their days; that their tendency is always downward, to poverty, crime and wretchedness, while the tendency of labor, is to elevate, enrich, and improve. That the most successful men in our great cities, as merchants and professional men—that the greatest names in our history—sprung from the country; from the ranks of the laboring population, the workshop and the field; and finally, to have shown that the poor day laborer—male or female—is more honorable, in every just sense of the word, than the proudest aristocrat of either sex, who despises labor; that the poor hired girl, who has learned to wash dishes or bake a loaf of bread, and works for her dollar a week, is entitled to, and should receive more consideration in American society, than that purely artificial being, who has been taught to despise every useful employment; to think nothing so vulgar as common sense; spending her time in the reading of yellow-covered literature—sighing over imaginary woes of imaginary beings, but deaf to the sufferings of real life around her, because she does not find them described in the last new novel.

But I must pay my respects to these interesting gentry, on some other occasion, trusting that you will agree with me as to the honor and dignity of human LABOR.

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REPORT

OF THE OAKLAND COUNTY AGRICULTURAL SOCIETY.

At the annual meeting of the Oakland County Agricultural Society, held at the Court House in Pontiac, on the first Tuesday (the 3d day) of January, A. D. 1853, the following persons were elected as officers of the Society for the ensuing year, viz:

President—CHARLES BALDWIN—Avon.

Vice Presidents—Wm. T. Snow—Addison.
Elbridge G. Deming—Oxford.
Nathaniel D. Bingham—Brandon.
H. W. Horton—Groveland.
James Patterson—Holly.
David Hammond—Oakland.
E. B. Clark—Orin.
Marcus W. Riker—Independence.
Jonah Goss—Springfield.
George A. Wendell—Rose.
Cyrus A. Chipman—Avon.
O. D. Richardson—Pontiac.
John W. Leonard—Waterford.
E. Bachman—White Lake.
O. P. Davidson—Highland.
Alexander Wattles, Jr.—Troy.

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Vice Presidents—Joseph J. Todd—Bloomfield.
George Pattison—Commerce.
Jedediah Durkee—West Bloomfield.
Jonas G. Potter—Milford.
Israel Bickford—Royal Oak.
O. D. Sutherland—Smithfield.
George W. Collins—Farmington.
Samuel Rogers—Novi.
Franklin Garner—Lyon.
Treasurer—Augustine W. Hovey—Pontiac.
Recording Secretary—Joseph R. Bowman—Pontiac.
Corresponding Secretary—Zephaniah B. Knight—Pontiac.
Executive Committee—John P. Le Roy—Pontiac.
Asa B. Hadsell—Bloomfield.
John P. Wyckoff—Waterford.
Jacob Van Valkenburgh—White Lake.
Luther Lapham—Farmington.
John Sprague—Troy.
John Thomas—Oxford.
George Satterlee—Bloomfield.
Amasa Andrews—Commerce.
Isaac J. Voorheis—Waterford.

The Executive Committee agreed to meet at the Court House in Pontiac, on the 2d Tuesday of February next.

The following amendments to the Constitution were voted to be made:

Article 2. The officers of the Society shall be a President, and one Vice President for each town in the county; a Treasurer, a Recording Secretary, and a Corresponding Secretary; an Executive Committee consisting of ten members, to be chosen for that purpose. The above officers shall be elected by ballot, and by a majority of votes cast at the annual meeting of the Society, and shall hold their offices for one year, (excepting the Executive Committee, who shall be elected for two years, one-half of whom shall be elected annually,) and until others are chosen in their places.

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On motion of O. D. Richardson, it was

Resolved, That the meeting now adjourn.

CHARLES BALDWIN, *President.*

H. N. HOWARD, *Secretary.*

—

At a meeting of the Executive Committee of the Oakland County Agricultural Society, held at the Court House, in the village of Pontiac, on Tuesday, the 8th day of February, A. D. 1853, present,

Charles Baldwin, President; Joseph R. Bowman, Secretary; Geo. Satterlee, Asa B. Hadsell, Isaac J. Voorheis, Luther Lapham, Executive Committee.

On motion of Luther Lapham,

Resolved, That we now proceed to the transaction of business.

After the transaction of the business brought forward, the Committee adjourned to meet again on the first Saturday in March next, at 10 o'clock A. M., at which time a full attendance of the Executive Committee is requested.

J. R. BOWMAN, *Secretary.*

—

At an adjourned meeting of the Oakland County Agricultural Society, held at the Court House, in Pontiac, on the 5th day of March, A. D. 1853, present,

Charles Baldwin President; John Thomas, Jacob Van Valkenburgh, Jno. P. LeRoy, Isaac J. Voorheis, and John P. Wyckoff, Executive Committee.

Resolved, That the next County Fair be held at Pontiac, on the 5th and 6th days (the first Wednesday and Thursday) of October next.

Resolved, That the members of this Society be, and they are hereby requested, to meet in the village of Pontiac, on the 13th day of April next, with teams, plows, &c., for the purpose of plowing and grubbing the lot belonging to said Society.

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Resolved, That the Executive Committee meet at the Court House, in Pontiac, on the 13th day of April next, at 1 o'clock P. M., and that the Secretary notify each member of the Committee.

Adjourned.

J. R. BOWMAN, *Secretary*.

At a meeting of the Executive Committee of the Oakland County Agricultural Society, held at the Court House in the village of Pontiac, on Wednesday, the 13th day of April, instant, present,

Joseph R. Bowman, Secretary; Jacob Van Valkenburgh, Asa B. Hadsell, John P. Le Roy, John P. Wyckoff, Executive Committee.

On motion,

Adjourned until the 21st inst., at which time it is expected that the members of the Executive Committee, and all others in the Society will be present with teams, &c., for the purpose of grubbing and clearing the Fair Grounds belonging to said Society.

J. R. BOWMAN, *Secretary*.

APRIL 21, 1853.

Executive Committee met pursuant to adjournment; present,

Charles Baldwin, President; Joseph R. Bowman, Secretary; Isaac J. Voorheis, John Sprague, John P. Le Roy, Asa B. Hadsell and John P. Wyckoff, Committee.

J. R. Bowman being about to remove from the county, resigned the office of Recording Secretary, and Z. B. Knight, of Pontiac, was elected in his place.

Resolved, That the Premium List for this year, as now adopted, be printed where it can be done the cheapest; that the Secretary superintend the printing, and that five hundred copies be printed.

The following persons were appointed Judges for the Fair, to be held on the 5th and 6th days of October next, ensuing:

Class No. 1—Cattle, Short Horns—Payne K. Leech, Walter Whitfield and Samuel Rogers.

Class No. 2—Devons—Same judges.

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Class No. 3—Natives and Grade—Almenio Whitehead, William L. Coonley and Ira Jennings.

Class No. 4—Working Oxen, Steers and Fat Cattle—James Bailey, John Morton and Ephraim Colby.

Class No. 5—Horses—Oscar F. North, Thomas Gerls and Luther Green.

Class No. 6—Work Horses—Rufus Hunter, Ira C. Seeley and Wm. Whitfield.

Class No. 7—Sheep—Theron W. Barber, Harrison Voorheis and Ira H. Butterfield.

Class No. 8—Swine—Henry W. Horton, Luman Brownson and N. D. Bingham.

Class No 9—Farming Implements—Nelson W. Clark, Andrew C. Walker, Linus Cone.

Class No. 10—Plowing Match with Horses—Rowland E. Trowbridge, George Pearsall and Isaiah B. Ward.

Class No. 11—Butter, Cheese, Maple Sugar, Honey, &c.—Mrs. Charles Baldwin, Mrs. A. B. Hadsell, Mrs. Linus Cone, Mrs. Andrew C. Walker and Mrs. Harrison Voorheis.

Class No. 12—Domestic Manufactures—Abram B. Mathews, Mrs. Wm. Cone, Mrs. John Thomas, Mrs. Alanson Sherwood, Mrs. Jedediah Durkee and Mrs. C. Walker.

Class No. 13—Needle, Shell and Wax-work, Painting and Drawing —Henry W. Lord, Mrs. S. P. Lyon, Mrs. James B. Hunt, Mrs. Almon Mack, Mrs. J. R. Bowman, and Mrs. E. P. Harris.

Class No. 14—Flowers—Eben C. Beach, Mrs. Alfred Williams, Mrs. Frederick Voorheis, Mrs. Geo. W. Wisner, Miss M. Van Valkenburgh, and Miss Martha Hilton.

Class No. 15—Fruit—Wm. Draper, Stephen Brown, Randolph Manning, K. P. Lyon, and Isaac Paddock, M. D.

Class No. 16—Vegetables—Stephen Lapham, Moses Wisner, Robert W. Davis, Marcus W. Riker, and Oliver P. Davison.

Class No. 17—Grain—Joseph Barkham, Platt Weeks, and Eber P. Smith.

Class No. 18—Field Crops—Premiums to be awarded by Executive Committee.

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Class No. 19—Poultry—Samuel M. Leggett, Horatio N. Howard, and Wm. Phelps.

Class No. 20—Miscellaneous Articles—O. D. Richardson, Washington Stanley and Almon Mack.

Adjourned to meet the last Saturday in August next, at 1 o'clock P. M., at the Court House in Pontiac.

Z. B. KNIGHT, *Sec'y.*

—

At a meeting of the Executive Committee of the Oakland County Agricultural Society, held at the Court House in the village of Pontiac on the 27th day of August, 1853, present,

Charles Baldwin, President; Asa B. Hadsell, Amasa Andrews, John P. Wyckoff, Luther Lapham, Geo. H. Satterlee and Isaac J. Voorheis, Committee.

Mr. Knight, the Secretary, being unable to attend on account of ill health, James B. Hunt was elected Secretary, *pro tempore.*

The resignation of John P. Le Roy, as one of the Executive Committee, having been received and accepted,

On motion,

Moses Wisner was elected as one of the Committee, to fill said vacancy.

On motion, it was

Resolved, That Asa B. Hadsell and Moses Wisner, be a committee to procure lumber and superintend the erection of the necessary buildings for the Fair, preparing the grounds, employing hands, and to do all other things necessary to be done, about the proper conducting of the business.

It was also

Resolved, That the Treasurer be requested to procure the tickets for members, and a sufficient number of ten cent tickets.

And it was further

Resolved, That the door keepers be instructed by the Treasurer to take and keep the ten cent tickets received by them from persons presenting the same at the gates, and deliver them to the Treasurer.

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The Committee directed that the above proceedings be published in both the papers in this village.

JAMES B. HUNT,
Secretary pro tem.

—

The Fair of the Oakland County Agricultural Society, was held at the Fair Ground in Pontiac, pursuant to public notice, on the 5th and 6th days of October, A. D. 1853.

The whole number of articles entered for exhibition and premiums, was six hundred and twenty-eight. The whole number of exhibitors was two hundred and thirty, as follows:

Horses,	108
Cattle,	58
Sheep,	36
Swine,	19
Jacks,	2
Poultry,	23
Teams for plowing,	9
Grain,	25
Field crops,	2
Vegetables,	104
Fruit,	70
Domestic Manufactures,	46
Butter,	15
Cheese,	4
Maple Sugar,	2
Honey,	3
Farming Implements, &c.,	19
Buggys,	4
Stoves,	5
Bread,	7
Flour,	1
Plants and Flowers,	10
Ornamental Needle and Shell-work,	40

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Drawing and Painting, ... 3
Miscellaneous, ... 13

Total, ... 628

The Society then listened to the annual address, which was delivered by William W. Phelps, Esq., after hearing which, it was unanimously

Resolved, That the thanks of the Society be tendered to William W. Phelps, Esq., for his very able address, with the request that he furnish a copy of the same for publication for the use of the Society.

LIST OF PREMIUMS

Awarded by the Executive Committee, as reported by the Judges, viz:

CLASS I AND II.—CATTLE—SHORT HORNS AND DEVONS.

Best 2 year old Short Horn bull, J. B. Ward, ... $4 00
" 4 " " cow, A. S. Brooks, ... 5 00
2d " " " " " 3 00
Best 1 " " heifer, " Patent Office Ag'l Report.
" 1 " " bull, John Waldron, ... 3 00
" bull calf, " A. S. Brooks, Patent Office Mech'l Report.
" Devon bull, Riley C. Cone, ... 5 00

CLASS III.—NATIVES AND GRADE.

Best 2 year old bull, John Springer, ... 4 00
2d " " J. P. Wyckoff, ... 2 00
Best 1 " " Jedediah Durkee, ... 3 00
" bull calf, Jesse Hazen, ... 2 00
2d " Jesse Lee Stout, ... 1 00
3d " C. A. Green, ... Patent Office Agricultural Report.
Best cow 3 years old and upwards, Benjamin Page, ... 5 00
2d " " " Stephen Lapham, ... 3 00
3d " " " Ira C. Seeley, Patent Office Agricultural Report.
Best 2 year old heifer, C. A. Green, ... 3 00
2d " " O. F. North, ... 2 00
3d " " John W. Leonard, Patent Office Agricultural Report.

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Best yearling heifer, Jesse Lee Stout, ... $2 00
2d " " L. G. Burch, ... 1 00

CLASS IV.—WORKING OXEN, STEERS AND FAT CATTLE.

Best yoke of working oxen, H. V. D. Bogert, ... 5 00
2d " " A. S. Brooks, ... 4 00
3d " " Wm. Davis, ... 3 00
Best yoke 3 year old steers, B. D. Coonley, ... 4 00
2d " " " E. L. Taylor, ... 3 00
Best yoke 2 year old steers, L. Fuller, ... 3 00
2d " " " B. D. Coonley, ... 2 00
Best " fat cattle, C. W. Green, ... 5 00
2d " " Joel Loomis, ... 4 00

CLASS V.—HORSES.

Best stallion over 4 years old, H. V. D. Bogert, ... 8 00
2d " " " Z. W. Caswell, ... 6 00
3d " " " E. H. Cressey, ... 4 00
Best brood mare and colt, Isaac L. Smith, ... 6 00
2d " " W. W. Whiting, ... 4 00
3d " " Charles Sly, ... 3 00
Best 3 year old horse, J. T. Griffing, ... 4 00
2d " " E. Bristol, ... 3 00
3d " " W. White, ... 2 00
Best 2 " " Isaac Osmun, ... 3 00
2d " " E. E. Sherwood, ... 2 00
3d " " John Todd, ... 1 00
Best 1 year old horse, B. Dewey, ... 2 00
2d " " W. Butterfield, ... 1 00
1 span 3 year olds, Ira L. Power, Patent Office Agricultural Report.
1 " " John J. Cole, " " "
1 " " E. Stewart, " " "
1 3 year old mare, A. Walton, " " "
1 " " W. C. Clark, " " "
1 2 year old gelding, Andrew Porter, " " "

CLASS VI.—WORK HORSES, &C.

Best pair farm horses, 8 years old, A. Wattles, ... 6 00
2d " " 5 " G. Bloomburgh, ... 4 00

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Pair farm horses, 4 and 6 years old, J. P. Wyckoff, Patent Office Mechanical Report.

Pair farm horses, 4 and 6 years old, David Windiate, Patent Office Agricultural Report.

Best pair carriage horses, 4 years old,				Wm. Davis,	$5 00
2d	"	"	"	Jedediah Durkee,	4 00
Best single carriage horse, 5 years old,				M. E. Crofoot,	4 00
2d	"	"	8	" A. A. Lull,	3 00
Single		"	12	" S. M. Leggett,	2 00
Single		"	9	" R. B. Morris,	2 00
Best single mare,			4	" H. Butler,	4 00

CLASS VII.—SHEEP.

Best Merino buck,			C. W. Green,	4 00
2d	"	"	L. Fuller,	3 00
3d	"	"	C. A. Green,	2 00
Best Merino ewes,			"	5 00
2d	"	"	"	3 00
3d	"	"	Wm. Holcomb,	2 00
Best Saxon buck,			G. Bloomburgh,	3 00
2d	"	"	H. W. Thomas,	2 00
Best	"	ewes,	G. Bloomburgh,	4 00
"	South Down buck,		Daniel Whitfield,	4 00
	"	ewes,	"	4 00
2d	"	"	Richard Windiate,	2 00
Best 3 fat sheep,			Samuel Hubbell,	3 00
2d	"		T. Gerls,	2 00
Best French Merino buck,			C. A. Green,	4 00
2d	"	"	L. Fuller,	3 00
Best pen ewe lambs,			C. A. Green,	2 00
"	buck	"	" Patent Office Mechanical Report.	
Superior French Merino buck, foreign,			N. S. Schuyler,	2 00
5 Spanish Merino ewes,			Joseph Thorpe,	2 00
3	"	buck lambs,	" Patent Office Agricultural Report.	

3 ½ blood yearling bucks, Sumner Stone, Patent Office Agricultural Report.

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4 ½ blood yearling bucks, L. R. Stone, Patent Office Agricultural Report.

CLASS VIII.—SWINE.

Best boar, A. Wattles,	$4 00
2d " E. H. Cressey,	3 00
Best breeding sow, Isaac Osmun,	4 00
2d " E. H. Cressey,	3 00
Best litter pigs, W. E. Pier,	4 00
2d " Chas. Frost,	3 00
Lot of imported swine from New York, L. K. Jenney,	2 00

CLASS IX.—FARMING IMPLEMENTS, &C.

Best cultivator for general use, R. B. Morris & Co.,	2 00
Best corn cultivator, " " "	2 00
Best farm wagon, Charles Parsons,	5 00
Best farm gate, Geo. Hopkinson,	2 00
Best straw cutter, Amasa Andrews,	2 00
Best buggy harness, Charles Brodie,	4 00
Best double carriage harness, Chas. Brodie, Patent Office Mechanical Report.	
Best buggy, Charles Parsons, Patent Office Mechanical Report.	
Best dozen brooms, John Hitchins,	1 00
Best parlor stove, Jas. H. Lockwood,	2 00
Parlor stove, James Andrews, Patent Office Mechanical Report.	
Parlor stove, Geo. W. Merrill, Patent Office Mechanical Report.	
Best cooking stove, Geo. W. Merrill,	3 00
2d cooking stove, Jas. Andrews,	2 00
Best corn planter, Jas. Andrews,	2 00
Best clover rake, Geo. Hopkinson,	1 00

PLOWING MATCH.

First premium, Lorin Burch, Troy,	5 00
Second " Alexander Wattles, Troy,	3 00
Third " Thos. Flinn, Bloomfield,	2 00

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CLASS XI.—BUTTER, CHEESE, HONEY, &C.

Best 5 lbs. butter in rolls, Mrs. Ira C. Seeley,	$3 00
2d " " " J. C. Gaylord,	2 00
3d 5 lbs. of butter in rolls, John Windiate,	1 00
Best tub 50 lbs. of butter, J. B. Wolcott,	3 00
2d " " " John Windiate,	2 00
3d " " " J. P. Wyckoff,	1 00
Best old cheese, Luther Lapham,	3 00
2d " J. H. Murray, Patent Office Mechanical Report.	
Best new cheese, Luther Lapham,	3 00
2d " J. H. Murray,	2 00
Best cap 10 lbs. honey, A. Judson,	1 50
2d " " H. Howard,	75
Best 10 lbs. maple sugar, G. W. Collins,	1 00
Best loaf bread, Mrs. A. N. Hitchcock, Webster's Eulogy.	

CLASS XII.—DOMESTIC MANUFACTURES.

Best 10 yards flannel, Mrs. Henry Mead,	3 00
2d " " Hibbard & Davis,	1 50
Best 10 yards woolen carpet, J. Hussey,	4 00
Best 10 yards rag carpet, Mrs. Cyrus Hadsell,	3 00
" pair knit silk stockings, Mrs. A. C. Baldwin,	1 00
" woolen " Mrs. J. Lee Stout,	1 00
" cotton " Mrs. Cyrus Hadsell,	1 00
" woolen mittens, Mrs. J. Lee Stout,	1 00
Best 10 yards linen cloth, D. Hammond,	1 50
1 piece cassimere, Hibbard & Davis,	1 00
1 " brown cloth, "	1 00
Best 10 yards plaid flannel, Mrs. Washburn,	3 00
2d " " " Mrs. D. Hammond,	2 00
1 piece fulled cloth, Edwin Chase,	1 00
Woolen yarn, Mrs. Edwin Chase,	50
" W. A. Dennison,	1 00

CLASS XIII.—NEEDLE, SHELL AND WAX WORK, PAINTING AND DRAWING.

Best ornamental needlework, Miss Reed,	2 00
" group of flowers, Miss Whitehead,	1 00
" piece of worsted-work, Mrs. O. F. North,	1 00

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Best marked collar, Mrs. Burlingham, ... $1 00
" patch work quilt, Wm. Sowes, ... 3 00
" white quilt, Mrs. J. J. Voorheis, ... 3 00
" silk bonnet, Mrs. Stone, ... 1 00
" straw bonnet, Mrs. Hendrickson, ... 1 00
" 2 lamp mats, Mrs. D. Paddock, ... 1 00
" vase worsted flowers, S. D. Brown, ... 1 00
" specimen of animal painting.
Painting in water colors, Miss Coates, ... 1 00
1 bird and melon-seed bag, Mrs. G. W. Collins, ... 50
1 sofa cushion, Mrs. J. Barritt, ... 50
1 netted tidy, Mrs. Hogan, ... 50
1 pair knit shoes, 1 net cap and 1 neck tie, Mrs. B. D. Coonley, 1 00
3 yards thread lace, Miss Canon, ... 1 00
1 ornamental slip, " Webster's Eulogy.
1 crochet tidy, 2 netted cake covers, Miss Wilson, .. Webster's Eulogy.
1 netted tidy, Mrs. Elnathan Phelps, ... 50

CLASS XIV.—FLOWERS.

Best and greatest variety of indigenous flowers, Miss J. L. Brownell, ... 1 00
Most beautifully arranged basket of flowers, Mrs. A. A. Lull, 1 00
Best hand bouquet, round, being 10 varieties of verbenas, Mrs. A. A. Lull, ... 50
Best collection of green house plants, Mrs. Alfred Williams, ... 2 00
Statuette and floral design, Mrs. A. B. Mathews, ... 1 00
Greatest variety and quantity of dahlias, Mrs. A. B. Mathews, 1 50
Best and greatest variety of dahlias, " 1 50
A very beautifully arranged basket of flowers, Mrs. P. Hogan, Webster's Eulogy.

CLASS XV.—FRUIT.

Best collection of grapes, Francis J. Smith, ... 1 00
Best single bunch grapes, Oscar M. Brownson, ... 50
Best variety pears, Samuel Rood, ... 2 00
Best lot of different varieties, Linus Cone, ... 50
" " " Jas. T. Allen, ... 50
Best 12 quinces, Mrs. J. Caskey, ... 1 00
" " John Short, ... 50

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One variety of very fine late plums, Charles, Elliott,	$0 50
Best 12 peaches, O. M. Brownson,	50
Best variety seedling peaches, Charles Elliott,	1 00
Seedling peaches, Henry Mead,	50
Seedling peaches, Mark T. Boice,	50
Best lot water-melons, S. M. Leggett,	1 00
Best 6 varieties of apples, A. Judson,	2 00
Best and greatest variety table apples, Charles Elliott,	3 00
Best seedling apples, John Chamberlin,	2 00
Best 6 varieties winter apples, John Clark,	3 00
Best specimen winter apples, M. Cross,	1 00
2d " " Wm. Wilson,	50
Lot of apples, Isaac Osman,	50
" " Isaac W. Ruggles,	50
" " C. Churchill,	50

CLASS XVI.—VEGETABLES.

Best 12 flat turnips, O. M. Brownson,	50
Best 6 blood beets, Alfred Williams,	50
Best 12 onions, M. Cross,	50
Best 6 heads cabbage, Alfred Williams,	50
Best 12 tomatoes, S. M. Leggett,	50
Best 6 pumpkins, L. Fuller,	50
Best 12 carrots, Linus Cone,	50
Best 12 parsnips, S. M. Leggett,	50
Best 12 sweet potatoes, J. T. Griffin,	50
Best half bushel potatoes, Chas. Frost,	50
Best half bushel of beans, M. Cross,	50
Best 6 squashes, S. M. Leggett,	50
Greatest variety raised by one exhibitor, S. M. Leggett,	1 00

CLASS XVII.—GRAIN.

Best sample twenty bushels blue-stem wheat, Linus Cone,	5 00
Best sample two bushels of barley, Linus Cone,	1 00
Best sample two bushels shelled corn, Henry Waldron,	1 00
Best sample one bushel of oats, T. Gerls,	1 00
Best sample of corn in the ear, Joel Loomis,	1 00
Best barrel of flour, being the only one exhibited, H. L. Paddock,	2 00

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CLASS XIX.—POULTRY.

Best lot Dorkings, R. H. Slayton, ... $0 50
" Large Fowls, B. C. Gunn, ... 50
" 3 turkeys, G. W. Collins, ... 50
" owned by one exhibitor, John G. Crombie, ... 1 00

A very fine lot of imported Shanghai and Cochin, L. K. Jenney, ... Patent Office Agricultural Report.

Very fine lot Dorkings, W. A. Nelson, Patent Office Agricultural Report.

Fine lot Cochin China and Shanghai, O. F. North, Patent Office Agricultural Report.

Lot of Poland hens, very fine; fine lot ½ Shanghai and Dominick, John G. Crombie, Patent Office Agricultural Report.

A very fine lot imported Shanghai; a very fine lot imported Dorkings, and two very fine Bantams, E. H. Cressey, Patent Office Agricultural Report.

Fine lot of Dorkings; fine lot of Shanghais, G. W. Collins, Patent Office Agricultural Report.

Very fine lot of hens; two very fine geese; Erastus Francis, Patent Office Agricultural Report.

Two beautiful Spanish rabbits, Wm. Whitfield, Patent Office Agricultural Report.

CLASS XX.—MISCELLANEOUS ARTICLES.

Best specimen of printing, Wm. M. Thompson, Mechanical Patent Office Report.

Case of dentistry, Wm. Cahoon, ... Mechanical Patent Office Report.

Case of daguerreotypes, C. T. White, Mechanical Patent Office Report.

Lot of drain tile, John Daines, ... " "

Best family cheese, prepared by Wm. Case, Mechanical "

The Executive Committee then adjourned to meet at the office of John P. Le Roy, Esq., on Monday next, at 10 o'clock in the forenoon.

J. R. BOWMAN,
Secretary.

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PONTIAC, October 10, 1854.

The Executive Committee met pursuant to adjournment, at the office of John P. Le Roy.

Z. B. Knight, having tendered his resignation as Recording Secretary of the Society, Joseph R. Bowman, was re-elected in his place.

Resolved, That John P. Le Roy and Moses Wisner, be a Committee to take charge of the Fair ground and the lumber and materials now upon the premises.

The following communications were laid before the Committee, by Wm. M. Thompson, Esq.:

BELVIDERE CITY, Sept. 24, 1853.

GENTLEMEN:—Have you an Agricultural Society, and when does it meet? I thought that it would be a good occasion to distribute, in a satisfactory way, a portion of my Congressional Documents.

If they will reach there in time, and some of your folks will send down a double team, and a good sized dry goods box, to secure them, in any time after this week, I will send of the Patent Office Reports, Agricultural and Mechanical, and Eulogies on Webster, say in all, about two hundred volumes, more or less, to be added one volume to each of the highest premiums, as far as they go.

The Eulogies, for the ladies' department; the Agricultural, to the farming, stock, &c.; and the Mechanical, to the mechanical department.

I will also send some extra volumes of various kinds, for general distribution, in your discretion. I should be pleased to be with you if possible, but dare not promise.

Respectfully your friend, &c.,

JAS. L. CONGER.

To Messrs. Wm. M. Thompson, Wm. Gilmour, David Paddock, and Levi Bacon.

To the Executive Committee of the Oakland County Agricultural Society:

GENTLEMEN—The accompanying letter was received by me a few days since, from the Hon. James L. Conger, Member of Congress from this District, containing his very liberal proposition to your Society, and after consultation with some of the officers thereof, and at their sugges-

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tion, I proceeded to Belvidere City, and received from Mr. Conger the documents embraced in the following list:

Patent Office Report, Agricultural, for 1851,	96	vols.
" " " Mechanical, for 1851,	14	"
" " " " for 1852–53,	34	"
Finance Report, for 1852–53,	5	"
Webster's Eulogy,	24	"
Five sets, 3 volumes each, Annual Message and accompanying Documents for 1851–52,	15	"
Eight sets, 2 volumes each, Annual Message and accompanying Documents for 1852–53,	16	"
Total,	204	"

Which I have deposited with the Treasurer of your Society, to be appropriated as you shall deem best, in enhancing the interest of the Agricultural Society of Oakland, and in accordance with the suggestions of the liberal donor.

I am, very respectfully, your obedient servant,

WM. M. THOMPSON.

PONTIAC, Mich., Oct. 10, 1853.

On motion of Moses Wisner,

Resolved, That the thanks of this Society be tendered to the Hon. James L. Conger, Member of Congress for the Third Congressional District, for the very valuable donation of about two hundred volumes of agricultural and other books, made by him to this Society.

Resolved, That a copy of these resolutions be signed by the President and Secretary of this Society, and forwarded to the Hon. James L. Conger.

The Committee then adjourned to meet at the Court House, in Pontiac, on the first Tuesday in January next, at 10 o'clock in the forenoon, to close up the business of the present year.

J. R. BOWMAN, *Sec'y*.

PONTIAC, January 3d, 1854.

The Executive Committee met pursuant to adjournment, at the Court House, in the village of Pontiac; present,

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Charles Baldwin, President; Joseph R. Bowman, Secretary; John P. Wyckoff, Luther Lapham, John Thomas, George Satterlee, Jacob Van Valkenburgh, Asa B. Hadsell, Moses Wisner, Isaac J. Voorhies, Executive Committee.

The following communication was received from A. W. Hovey, Esq., the Treasurer of the Society, which was read, accepted and adopted:

PONTIAC, January 3, 1854.

To the President of the Oakland County Agricultural Society:

SIR—Herewith I have the honor to submit my Annual Report of the financial condition of the Agricultural Society, showing a balance in my hands of $21 31. In addition, there is due the Society from J. Caskey, for rails sold, five dollars, and a balance in judgment against C. W. Tuthill of $39, for lumber sold.

A. W. HOVEY,
Treasurer Oakland County Agricultural Society.

—

A. W. Hovey, in account with the Oakland County Agricultural Society.

			DR.
January 4, 1853.	To cash on hand at last report,		$ 1 35
October 6, "	"	for membership tickets,	289 50
6, "	"	for ten cent tickets,	313 20
17, "	"	on Tuthill's note,	20 00
Total,			$624 05

1853.		CR.
Jan. 14.	By paid D. C. Buckland & Co. for lumber,	$18 09
Oct. 6.	" A. B. Hadsell and others, for lumber, nails, and work on fair ground, as per vouchers,	181 77
10.	By paid for services of gate keepers, watch, &c.,	21 00
	By paid J. O. Whittemore, Ast. Treasurer,	3 00
	" for printing premium lists, cards and stationery,	27 63
	" J. R. Whittemore, for pumpkins,	2 00

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Jan. 2.	By paid for premiums of 1852,	$28 00	
3.	" " 1853,	312 75	
	" Wm. M. Thompson, expenses after books,	8 50	
	By cash on hand,	21 31	
	Total,		$624 05

Resolved, That the premium of three dollars, for the best quarter of an acre of ruta bagas, be, and the same is hereby awarded to Joseph Coates.

The following is the statement upon which the above award was made:

STATEMENT,

Relative to the cultivation and produce of half an acre of ruta bagas, raised by Joseph Coates, Pine Lake, and entered for the premium at the Annual Fair of Oakland County Agricultural Society, for 1853:

The land was a strong clay loam, and had been under a crop of Indian corn the previous year—it was well manured with rotten barnyard manure, in the month of May, was well worked with the drag and cultivator, and sowed broadcast about the middle of June, the seed being covered with a light brush harrow. The seed came up well, and the land was hoed twice. The severe drought of the summer stopped the growth of the plants, and they made very little progress until the fall rains, when they grew rapidly until the time the crop was taken.

In the month of November half an acre was accurately set off by the chain, and the bagas taken up—after cutting off the tops and top roots, the produce of the half-acre was two hundred and nineteen bushels. They weighed 65 lbs to the bushel, consequently the produce per acre would be four hundred and thirty-eight bushels by measure, or twenty-eight thousand four hundred and seventy pounds—that is, fourteen tons and nearly a quarter, per acre, by weight.

I think that had the early part of the season been more favorable, the produce would have been at least one-third more.

I certify that the above is a true statement.

JOSEPH COATES.

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I assisted in the cultivation and measurement of the above mentioned crop of ruta bagas, and certify that the above statement is correct.

ALFRED COATES.

Personally appeared before me, Joseph Coates and Alfred Coates, who made oath that the above statemant was true.

JOHN ELLEWOOD, *Justice of the Peace.*

JANUARY 2, 1854.

The Committee then adjourned *sine die.*

JOSEPH R. BOWMAN, *Recording Sec'y.*

NOTE.—The whole amount of cash premiums awarded by the Society for 1853, is $405 75, for which drafts have been drawn upon the Treasurer.

The Secretary of the Society last year having omitted to make the Annual Report to the Board of Supervisors, they refused to raise the 1-10th of a mill, on the valuation of the County, required by law to be raised for agricultural purposes, by which the Society lost about $275, and the Executive Committee were compelled to curtail the premium list on that account.

It will be perceived, however, that the amount of the receipts of the Society, the present year, over the last, for membership and entrance tickets, is about fifty dollars, showing a steady onward movement on the part of the Society.

The Society expect to be able to erect permanent buildings upon the Fair Ground the ensuing year, which will prevent the expenditure of large sums yearly, for the erection of temporary buildings.

I will conclude this Report with some extracts from our village papers.

[From the Oakland Gazette.]

It is very plain from the Exhibition held last week, that there is generally a substantial improvement in the art of farming. The horses, working oxen, cows, sheep, swine, fowls, fruit and vegetables, very far excelled any that have ever before been brought together in our County Fairs, in competition with one another. In regard to the preeminence in all those various productions of the animal and vegetable kingdoms, the Viewing Committee needed, and we doubt not, received the sympathies of the people. There were horses, oxen and cows, from which it would puzzle a covetous man to make choice.

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The lateness of the season prevented the decoration of Floral Hall, as usual, but the exhibition of bed quilts, carpetings, flannel &c., was creditable to the maids and matrons, as well as the manufacturers of Oakland county.

The attendance on the second day was very much larger than has ever before been assembled, and the total receipts of the Society for membership and admission tickets was a little over six hundred dollars. As a low estimate, we should say that seven thousand persons were in attendance at the county Fair.

The officers of the Society, spared no pains in promoting the success of the Fair, but they learn that men are not all alike—gentlemen—and that perfect order cannot be secured except by the aid of an efficient police. This fact was demonstrated by the summary removal of the beautiful specimens of fruit, without reference to the "rules and regulations."

[From the Pontiac Jacksonian.]

At no previous Fair, were so many in attendance as upon this occasion. Our village was literally full of people. The manifestation of interest in agriculture, is a good evidence of the prosperity which we are rejoiced to notice among our farmers. The Agricultural Society will be benefitted by this approving testimonial.

We are sorry to notice a falling off in Agricultural implements, on exhibition. McCormick's Automaton Reaper, exhibited by Mr. James Townsend, of Waterford, was a superior implement, and one which every farmer will be benefitted by introducing into general use. Dealers in Agricultural implements should on no condition, fail to be fully represented at our Fairs.

The highest commendation is due the President, Secretary, and officers generally, for their efforts to secure the success of this Fair. The members in attendance, were never before so great, and produced some derangement, which no efforts on the part of the officers of the Society could entirely prevent.

JOSEPH R. BOWMAN,

Recording Secretary, Oakland Co. Agricultural Society.

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ADDRESS

DELIVERED BEFORE THE OAKLAND COUNTY AGRICULTURAL SOCIETY.

BY W. W. PHELPS.

Mr. President and Fellow Citizens:

Every intelligent inhabitant of this continent justly regards its discovery as the most important event in history. It was a bold thing to push beyond all known landmarks, and commit lives and fortunes to an unknown and dangerous sea. It required a still higher fortitude to overmaster and control a disheartened and mutinous crew. But the commanding and enthusiastic spirit of Columbus was equal to the emergency. Mutiny was suppressed, and the doubting, trembling sailors were hopefully pointed to the west. Sun after sun had set in that west, disclosing naught but a wide waste of waters—hope itself had almost died, when, one auspicious night, from ship to ship and man to man, the joyous shout was borne along, *A light!—A light!*—A beam of light had discovered to the anxious eye of Columbus the long sought land, and a continent was born to the inheritance of civilization.

The light which pointed the adventurous mariner to unknown shores, was a type of that destiny which was to make the new continent a light to the nations of the earth. Our country—this goodly union of States—the best fruit of this discovery, has not only been a light for all people, but an example, guide and asylum. Our liberty, religious and political; our progress, mental and material—are extending their mute teachings to every land and people. As the star which shone on Bethlehem, at our Savior's birth, has illumined a world with a pure and perfect Christianity, so will the light of our liberty and progress shine upon kings and people everywhere, shedding a like benign influence upon man's social and political condition.

Heretofore we have taught the lessons of progress and republicanism by our success and prosperity. It will not always be so. When Capt. Ingraham forcibly and successfully resisted the attempt, by the Austrian authorities, to seize Koszta, a Hungarian patriot, upon the simple ground that he had made application to become an American citizen, so inviolable is American citizenship regarded, and in a port of a neutral European power, brought the loaded cannon of the St. Louis to bear upon

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a superior force of Austrian marine, and threatened their destruction unless Koszta should be delivered up—redressing national insult upon the spot—he did an act of duty, which at a step advanced this government and its policy to a position that fifty years of unvarying success in diplomacy would not have done. The truth is proclaimed, that here "the free spirit of mankind" is vindicated. We are but working out our destiny; and the same Power that guides the wild fowl's trackless flight through illimitable air, is guiding this people in their prosperity and mission.

Pre-eminent as has been the political and social advancement of this country, it holds no comparison with its material and natural development. The able French author, De Tocqueville, says: "America is a land of wonders, in which everything is in constant motion, and every movement seems an improvement. * * No natural boundary seems to be set to the efforts of man; and what is not yet done, is only what he has not yet attempted to do." There are those now within the hearing of my voice, that well remember when Western New York was considered the outer verge of western civilization. The settlement of Michigan and other great Western States is yet more recent. With the exception of a few French settlers, and a still smaller number attached to the army, and surrounding our forest forts, the life, soul, and strength of the west are the growth of the last few years. The restless energy of our people has hewed from the forest, States—has built towns, villages and cities, and startled the ever retreating savage with the rushing rattle of the railroad car. In this brief time we are surrounded with all the necessaries and many of the luxuries of life; and in every element of material prosperity we are in advance of any people in Europe, and compare favorably with the most prosperous of our sisters of the confederacy.

As the underlaying rock sustains and keeps in place the earth's surface, so agriculture underlies and is the ground-work of our material prosperity. The agricultural class comprise three-fourths of the people, and represent three-fourths of the wealth of the country. They are the first producers of food and clothing; their products form the great bulk of the nation's exports; and examine all the operations of trade and commerce, and their intimate and absolute dependence upon commerce will be apparent. If the earth did not annually yield of her

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abundance, in one brief year there would scarce be a vestige of animate existence left. From the remotest antiquity, therefore, all nations and people have honored agriculture.

It is to promote this important branch of human industry that we have met here in Oakland to-day. We have met to exchange opinions and reason together. "Let the farmer," said an able speaker before our State Society, "when he meets his brethren here, meet to instruct and be instructed, and sever himself from little prejudices, partialities and traditions." There is not, perhaps, a farmer here, but, taught by experience, has found his past year's farming in some particulars wrong, and has resolved to attempt some improvement that will avoid, if possible, the difficulties of the old system. Your farmer friend, who meets you here to-day, perhaps on a similar errand, may impart the desired information. Instruct each other—in this way these annually recurring Fairs will become vitally important and profitable.

The inventor and mechanic bring here their most important contributions in aid of agriculture. Many late improvements in farming implements will be exhibited, and biggoted opponents of change may abandon their obstinate adherence to those implements that once, perhaps, were regarded best, for such as experience has now proved to be better. "Seeing is believing," it is said; and a few minutes examination will often do more to break away old prejudices than the most elaborate explanation. "History," says Macauley, "is philosophy, teaching by examples." Fairs like this, teach agriculture by examples.

A hint is something to hang a thought or improvement upon; and can the observing man go away to-day without finding very many things to give him hints?—hints that will be most important and valuable? The simple falling of an apple from a tree, to use a common illustration, is said to have suggested a train of thoughts to the mind of Newton, that revealed to his sagacious intellect the laws of gravitation, and which enabled him to explain the motions of this and the other vast systems of worlds that occupy limitless space. Let no hint of to-day fail of awakening a suitable degree of attention. Every one should feel at all times, and more especially on such occasions as these, the spirit of the learner. Such a spirit will be amply rewarded.

Another benefit resulting from these fairs is to arouse a just spirit of emulation among farmers, to get and have the best of everything a far-

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mer needs. From boyhood to the grave, in all ranks and professions, a desire to excel in the business or occupation chosen, is the chief cause of success. Every good farmer must delight in a fine crop—in fine cattle, sheep, and fields, and will prize every excellence of an agricultural nature. The comparison, fairs of this kind enable us to make, shows that others excel us in some things; and as nothing would be more gratifying than to have the best, a spirit of competition is awakened, and redoubled efforts are made to push forward in the race of agricultural improvement. Nothing, perhaps, better illustrates this principle, than to notice the effect that a farmer, who has an excellent dwelling, neat and comfortable outbuildings, the best stock or the best crops, has upon his neighbors. Step by step they follow after, onward and upward, until that farmer's genial influence diffuses itself for miles.

As coals of fire heaped together glow with a more intense and brilliant heat, so will the fervor and zeal of our farmers be promoted by this coming together. It is the manifestation of interest and sympathy among those having kindred pursuits and similar aims; and the wider this interest in each other, and in agricultural improvements, extends, in that very proportion will agriculture be advanced.

Here is proclaimed the dignity and importance of labor. Who can look around to-day upon the unnumbered evidences of thrift, improvement and plenty here displayed, and know that all this is the direct result of the creative power of toil, without acknowledging in its full force that "labor bringeth blessings?" It is the farmer who creates, who feeds, and sustains the rest of mankind.

The State Fair at Detroit, last week, furnished examples of agricultural excellence which will send their teachings to the most remote corner of the State. In many respects, the exhibition this year was no marked improvement upon some of its predecessors, yet enough was exhibited to place Michigan among the first agricultural States. As a wheat raising, wool growing, fruit and vegetable producing State, we have, according to our population, no superior, and scarcely an equal. The Fair was in all respects creditable to the State, and its agricultural growth, and enforced the perpetual truth of the beautiful motto of our coat of arms: *Si quæris amœnam peninsulam, circumspice.* "If you seek a pleasant peninsula, look around you."

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Fairs are in harmony with the practical teachings of the age, and are among its prominent characteristics. The Exhibition of the Industry of all Nations, which is now attracting vast numbers to the commercial metropolis of the Union, is a noble tribute to human skill and labor. Applying to this Exhibition the utilitarian tests, and regarding it simply as an aid to science and labor, and the best of it—incomparably the best—is that portion of it which was contributed by American art and American industry. The Crystal Palace itself, the most beautiful and complete structure of the kind ever yet erected, is all our own, and will do honor to any people. View the building from any approach, and its perfect proportion and architectural beauty will be apparent. Upon entering, the interior arrangements strike the mind as more perfect and faultless, if possible, than its exterior. The distribution of its ample space—its various compartments—its galleries, and their connection with each other, and the first floor, are all so complete, that its thronging crowds can all be accommodated with the greatest ease. When lit up at evening, with its many thousand flashing lights, it calls to mind those illuminated halls of Moore—

> "Where at once the glittering saloon
> Bursts on the sight, boundless and bright as noon."

It is then more like some fanciful palace, built by the genii, than a reality, which is dedicated to toil, art and science.

Among the first articles on exhibition that attract an admiring attention is Powers' Greek Slave, Eve, and the Fisher Boy. These unrivalled works of genius, are convincing proofs that we outstrip the Old World, even in the higher walks of the fine arts. As we proceed, in every direction is a maze of beauty. We wander from object to object, each and all testifying to the exquisite and perfect skill—the refined an artistic taste—of the nations of the earth. On every side all is curious, costly and rare—the offspring of luxury and a fastidious refinement.

One hastens on as a butterfly speeds from flower to flower, to admire some new beauty or elegance; and yet, though all is charming, it produces an unsatisfactory effect upon the mind. When at length the American department ia reached, we examine the many evidences of American ingenutity and invention with a feeling of relief and approbation. The reason is simply this: we Americans are a practical people. Whatever tends to develop and promote the practical arts—those

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sciences that multiply our powers to accomplish useful objects and add to the sum of individual and national wealth and happiness, alone stand the rigid tests we apply to everything claiming public favor. Alison, the great English historian, in speaking of this practical tendency of our character, indulges in a panegyric of the useless nonsense of the past, and thus sneeringly alludes to us: "Nothing is studied but what will render the human mind prolific of dollars." The insinuation is false.

Utility is the object aimed at—dollars the mere consequence. The useful is the national idea; and in things practical, therefore, we excel the world. We are glad to know that the World's Exhibition in New York will carry to every nation of the globe, the grave and important lesson, that the Americans are a practical and progressive people. It will be worth more to us than any national triumph we have ever yet obtained.

We have said that our coming together to-day was to advance agricultural interests, and hope the knowledge of agriculture, both as a science and an art, will be increased thereby. We have now but entered the road to improvement. We must press forward to still greater advancement. In every age, agriculture has marked the progress of civilization. The useful arts are its attendants, and just in proportion as it is prospered, will manufactures and commerce prosper. The busy wheel and dashing prow are moved by no other impulse; and yet, a few brief years since, experience was the sole light to guide the farmer's efforts. A new day has dawned, and enlightened science yields its thousand aids. Those are yet living who were among the first to apply the discoveries of chemistry to agriculture, to examine and analyze soils, to inquire into the constituent elements of plants and their food, to investigate the relative value of animal and vegetable manures and the method of their application, and make, as it were, a chart, by which the farmer can guide his labors. The time is coming, when the world shall know that the skill

> "That graces life, that lightens toil,
> May spring from courage more sublime,
> Than that which makes a realm a spoil."

To the eye of the agricultural chemist the whole earth is one vast labratory, and every growing thing or blade of grass, is illustrating some principle or law of Nature.

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The poet finds—

> "Tongues in trees, books in the running brooks,
> Sermons in stones, and good in everything."

So shall we; and so far as a just knowledge of Nature's laws is a practical benefit, they should be understood and heeded. Experience teaches that some soils are adapted to wheat, others to grass, others to oats, corn, &c. There are reasons for this adaptation; and these several soils respectively contain just those elements of productiveness that suit the particular crop. By analyzing a soil we learn its constituent elements; and if, for instance, it is found to lack those which make it a good wheat soil, the needed fertilizers can be added. This is the principle which runs through the entire system of scientific farming. The main object is to find out the elements required by the soil, and to supply them. An impoverished soil must receive back what it has been deprived of. Every farmer who carries his manure upon his fields, puts in practice this same principle of compensation which agricultural chemistry recognizes. If, says an able agricultural writer, you detect a superabundance of acidity or any injuring element in the soil, make use of counter agents; if any fertilizing quality is needed, supply the deficiency by manures. "It is thus, by studying Nature, and imitating her process, by labor applied with knowledge, that her riches are to be extracted." It is adopting the golden mean, "To keep the end in view, and follow Nature."

It is estimated that $33\frac{1}{3}$ per cent. of all agricultural labor does no good whatever, and is therefore worse than thrown away. When we consider that there is but one right way of doing a thing, and innumerable wrong ones, we must conclude that the estimate is not so far from truth. In throwing out these suggestions, I am forced to acknowledge my ignorance of practical farming. Yet, in view of the chances to improve by the application of science to this great business of life, we most earnestly recommend to our farmers to bring to their aid all that our best agricultural writers and our best farmers teach. There are many agricultural books and papers of great merit within the reach of all, and it is my pride and pleasure to say that our own State has two as excellent agricultural journals as any in the United States. No good farmer should be without them.

The mind should aid the hands in the due performance of the farmer's labor. Observation and reflection are absolutely necessary to agri-

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cultural success. The profession of agriculture is not simply wearying toil. It is a noble calling, where the mind may have a wide range, and in the study and practice of which the whole man can and should be fully developed.

I am proud to know that the agricultural class of this Union, and more especially of this western country, furnishes the noblest specimens of their vocation. Here, under the genial influence of our institutions, every one is or can be the owner of land sufficient for his wants; and the freeborn freeholder in this country is surrounded by too many inducements to be intelligent, to remain long ignorant. How many are there among us who have secured a competency, and fitted themselves for the best positions in society, in spite of the bitter disadvantages of early youth? These social prizes have won more men to activity and goodly standing among men, than ambition, though "by that sin fell the angels." Who tills the land he owns, and reaps for his own household, enjoys the highest liberty man is capable of. Such realize the full value of our independence, and in all future time the strength and enduring power of this country will be in their hands. The best fruit of our institutions is that they elevate the purpose of the laborer, and dignify the labor. Has it ever occurred to any of you, that in no country on the globe besides this, is agricultural toil made honorable by the usages, the forms, and the opinions of society?

Compare the condition of our agriculturists with those of other countries, and how flattering the contrast! It is the general belief that the farmers of England (next to this the most prosperous nation of our day) are superior specimens of their class. Let us hear the testimony of a competent Englishman. The correspondent of the London Morning Chronicle, in speaking of the English agricultural laborer, says: "Education has advanced him but little beyond what he was in the days of William the Conqueror." "They (the laborers, he says) are mere human machines, working only with their hands and not at all with their minds"—that "few of them can read, and fewer write,"—that "there is neither speculation in the eye, nor any other than the expression of the mere animal in their countenances,"—that "they are entirely wanting in the independent bearing of the man; are awkward in their gait, and dress in a garb which belongs to another century than this;" and "that recreation and sensuality are identified in their minds as one and the same thing."

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These statements are corroborated by Mr. Isham, in an interesting work upon England, just published, called the "Mud Cabin." The industry which there barely secures a wretched existence, here makes property and independence. We have now among us many most successful English farmers, and they do no doubt thank the kind Providence which so overruled their destiny, that they left the falling fortunes of a decaying State, for the prosperous and life-giving impulses of a new Republic. And when we consider that all this wretchedness is not the want of natural capacity, but the wrong of years of grievous taxation —of oppressive rent-paying to titled landlords—we can hardly resist in joining the expressed wish of Mr. Isham, "that there may be an upheaval of that low-lying mass, be the consequences what they may."

The sentiments of the Marselleise Hymn, sung by the early revolutionists in France, kindled a flame of wild revolution, which breathes a fearful warning. Does not the sentiment of these lines apply to England?

> "With luxury and pride surrounded,
> The vile, infatuate despots dare,
> Their thirst of gold and power unbounded,
> To mete and vend the light and air."

At this day the people of England pay per head, for every man, woman and child, a tax of $13. In this country we scarcely pay $2 00. Besides, it should be considered that England is all finished and fenced in, while we are now just building our canals and railroads, our roads and bridges—just, as it were, commencing housekeeping.

By thus comparing the prosperity of agriculture here, with its condition in other countries, we are taught how much we are indebted to our free and labor-rewarding institutions. We have worked out a glorious destiny for ourselves, while the laboring mass of other countries are trod beneath the iron heel of power. Truly, "our lines have fallen to us in pleasant places," and ours are "goodly heritages." The Peninsula State, located where the grains and fruits of the earth can be produced in prolific variety, but where the climate is such as to demand labor as the price of existence, calls into full and perfect exercise, every ennobling quality of mind and body. Toil is Heaven commanded. Place the strongest energy where a bountiful Providence lavishly supplies every want, and affords all that is needed to sustain life, by simply

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reaching forth and eating, and in time, enterprise, skill, and even morality, are lost. "Labor bringeth blessings."

As compared with the other sisters of the confederacy, Michigan can establish her fertility and prosperity by statistics. Although among the youngest and less populated of the States, and possessing less of improved land than twenty of them, yet in sheep, she is in advance of twenty-one States; in working oxen, of seventeen States; in wheat, of twenty-six States; in wool, of twenty-three States; in potatoes, of twenty-one States; in hay, of twenty-one States; in clover seed, of twenty-three States; and in maple-sugar, of twenty-six States. We had on the first of January last, more miles of Railroad in operation, than 18 of the States, and the same number of miles Vermont has. Nineteen States exceed us in population, and yet, in many branches of industry, and all elements of wealth and progress, we yield to none. Let us encroach a little more upon our Northern forests, and the very front rank will be ours.

Were all these evidences wanting, we have but to refer for a moment to the past—a past not reaching back to another generation—when most of you, fellow-citizens, came to hew for yourselves homes from the dense forests of Michigan—to make the wild wood resound with the busy energy of civilization; to you who have seen a great State spring from nothing—who know by the convincing evidences of your senses, of the marvelous progress that has been going forward here, for the strongest proofs of my proposition.

Ten years ago, Francis Granger, in an address before the New York State Fair, at Rochester, said that the man who raised the first bushel of wheat in Western New York, was then present, and in the enjoyment of strong and vigorous health. Would it be a wide stretch of the imagination to suppose that some one now present could to-day make the same honorable boast in Oakland County?—a County that this year sends to market more wheat, doubtless, than any County of this Union, and more than any one of thirteen States?

A few short years ago, and the young, hardy, and hopeful, with stout hands and hearts as their sole capital, were the only ones who sought a home in our County and State. A fertile soil and labor supplied the place of wealth, and that toil is now meeting its reward. Your land has

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become valuable. Your abundant crops meet a ready market at remunerative prices, and your present prosperity needs only to be tempered with wisdom, to make you in all things truly independent.

In this connection, let me give a little advice. Advice, at all times, is easier to give than to follow, unless it will put money in our pockets; and as no other would be heeded, I assure you that is my object. The general prosperity of agricultural pursuits has, this fall, given us more means than our necessities or wants absolutely require. If, therefore, you would enjoy your prosperity, *pay as you go*. Ready money will buy more than any man's credit. Five per cent., at least, will be saved by paying cash. Sellers can easily and well afford, considering the uncertainty and perplexity of collecting even good debts, to make that deduction to any one; and the amount saved by every one each year, will be a handsome sum. With many people, also, ready money operates as a check upon the imagination; and the buyer, before he parts with his cash, will most generally stop to inquire if he really needs the article for which he proposes to exchange it. "The borrower is servant to the lender," saith the Scripture; and by heedlessly running in debt, we become the servant to the merchant, mechanic, doctor, &c. We mortgage our own happiness—the policy is ruinous, and many a poor fellow has found, to his cost, that

> "The man that once did sell the lion's skin
> While the beast lived, was killed with hunting him."

Besides, the luxury of being independent—of owing no man a dollar—is worth more than all the personal luxuries money can surround us with. Ostentatious display and useless show are wholly inconsistent with a farmers success; and over whom they exercise control, they become the bitter canker of existence. Comforts of all kinds our farmers can and should have. Everything that can make them independent, or happy, or successful as farmers, should be purchased; always living within one's means, and *paying as you go*. If you never paralyze your efforts or destroy your independence by getting into debt, a happy home and a competency will be the consequence.

The last census discloses many interesting facts in regard to our county, which it may be gratifying to recall to mind. Oakland is the first county in Michigan in almost every branch of agricultural wealth. We have more horses, more cows, more working oxen and cattle of

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every kind. We have more sheep—nearly a sixth of all in the State—more hogs, and more value of live stock. We raise more wheat—nearly a seventh of all raised—more rye, more corn, more oats, more potatoes, more wool, more orchard products—have more butter, more cheese, and more hay than any county in the State. The articles on exhibition here to-day, proclaim our supremacy in unmistakeable language. And at the present prices of agricultural products, shall not our county yet advance in all the elements of prosperity?

Having within the past six months visited ten of the States of our Union, it has been my pride to compare our State with other and older States; and what more than all else has favorably impressed upon my mind our progress and prosperity, is the neat and tidy appearance of our dwellings, farm and outbuildings—those conveniences and comforts which so peculiarly manifest thrift. In this country, when a house has a tumbled-down look, its owner, it is safe to conclude, has a most decided tumble-down-into-the-gutter look. Like spots on the sun, these sights are rare. It is more common to see the man whose axe cleared the forest from the spot where his canvass-covered wagon was his first shelter from the storm and dew, now surrounded by every comfort that industry affords. His white house, his barns, his cattle, his orchard, his neat garden, and well-fenced fields, all his own, are the ample rewards of his toil. In our county, the log cabin, with its blazing fire and wholesome cheer is almost forgotten.

Surrounded as we are by these multiplied evidences of thrift, there never was a period, perhaps, that pointed so earnestly to the future. We must learn what that future has in store for us. Where, in the wild wood's shade, scarce the forest flower grew and flourished, fields are now waving with the fruits of the earth. A virgin soil to till, and energy to till it, has been the cause of building up these States at the west, and has done more for the remarkable and wonderful growth of this country than all other agencies. The day is not distant when the desert will be reached and passed. The Oregon already hears other "sounds"

"Save his own dashing."

The busy Anglo-Saxon is there, and the Pacific will soon hem in the western tide of emigration. That must be a barrier to further advance.

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To sustain our future millions, we must multiply the products of the land we already have. This is a result we cannot bring about too soon. Agriculture should be taught as a science, and a knowledge of all its details be universally diffused. It should not be an anomaly to find a "*learned farmer*." We should know, and must know, how to make land produce the most—how to alternate the crops, how to manure so as to supply just what every field may need to adapt it to the proposed crop; how to economise, fodder, and fatten animals at the least expense; how to reclaim worn out soils and subdue waste land. Discoveries in relation to every subject to which we have alluded are making every year, and they should be known. Wake up, then, every one of you, and prepare yourself with every help to agricultural improvement and progress. "A little farm well tilled," is better than broad unproductive acres. There is an intimate connection between knowledge and productive labor, and yet it took nearly eighteen hundred years to find the application of this truth to agriculture. It has been said that those who labor with their hands are, as it were, the strong pillars that support the living world; yet the hands are not entitled to all honor. "The hand cannot say to the eye, I have no need of thee." An aid more essential than all else, is an intellect guided by science. Practical education, just the kind to which we have alluded, is what farmers, and all, need. Success in the future will greatly depend upon it.

Education generally diffused is the grand idea of the age. A well stored mind is more important than a well-filled pocket. Considering the intelligence required of an American citizen, it should be the pleasure, as it is the duty, of every one to educate himself and his children. We speak now of practical education. Give children every advantage that the district school affords, and upon that school spare no expense. There is no economy more fatal to the well-being of society than a poor school because it is cheap. Every family should be abundantly supplied with useful books and papers: they will be the best of schoolmasters, and the winter fire-side will be a school of incalculable benefit to all, from the prattling child to the grey-headed father. If means admit, send the more advanced to some higher school. Absence from home, even, has its valuable teachings.

Our Normal school at Ypsilanti will be found a most useful auxiliary to the cause of education, especially to those who expect to make agri-

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culture the business of life. Our University, disenthralled, as we hope it is, of the biggots that were a mill-stone around its neck, extends its free invitation to all, and gratuitously opens the higher walks of science and learning to the youthful aspirant. Every child of the State should be educated; and it is our boast to know, that to all, a wise and munificent State policy has afforded the means of education almost free—free enough for any who will boldly endeavor to make their way to the honorable distinctions of life and society. "There is a tide in the affairs of men (says Shakspeare,) that taken at the flood, leads on to fortune; omitted, all the voyage of their life is spent in shallows and in misery." Youth is that flood-time, and if then, education, the high road to fortune, is not obtained, in nine cases out of ten their lives are literally spent "in shallows and in misery."

In this country, the future holds out inducements to all. A general and wide spreading excellence is the consequence. The front ranks are constantly filling up with new recruits, drawn from every rank in society. The sons of the distinguished and wealthy are constantly put aside by the keener ambition and hardier energy of the humble unknown, that set their mark high, and fearlessly press on to the goal. In this country, as a general rule, it is such that win the race. In other countries, occasionally, one whose boundless powers, unextinguishable ardor, restless ambition and desperate boldness, enable their possessor to break the chains that bind him down, and rise to the highest eminence. He is one of millions—a Brougham, perhaps, that forces open the peerage by his labors—that one concession made to plebeian talents, and the doors are shut upon a whole generation of aspirants. Here the broad avenues are open to all, and the blighting curse of caste, is not upon us.

An exhortation to youth is unavailing, unless the mothers of the land do their duty. "They mould the character of our race." "Whatever be the face of man, one stamp he always wears upon his brow—that which the mother hand impressed upon the soul of her child." The women of this land must catch the prevailing spirit of progress. The events of the future, and an important control of its development, is largely dependent upon them. The youth of the west have a spirit of enterprise and go-ahead that is not equalled anywhere; and was it not because their hours of infancy, when their minds were impressible

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in the highest degree, were surrounded by the development of our forest homes, and the great impulses of a new State?

Our prosperity has come upon us so like the morning sun, bursting from a cloud, that we look, I fear more at our prosperity than at its causes. It was not long ago that it required a day of hard labor to reach Detroit. Now, two days traveling from this place will land you in New York, and by more routes than one. In a few months, that time, short as it is, will be reduced to thirty hours. The prices of our produce, therefore, rise and fall with the markets in New York, as regularly as ebbs and flows the tides. It is these facilities for cheap and rapid communication, bringing Michigan in competition with that farmer who with every rising sun sees New York in the dim distance, that has worked this change. A market is brought to our doors. We supply the manufacturing establishments with the raw material—they supply us with the manufactured article. To-day the bargain is made —to-morrow the exchange is effected. Wheat bought in your streets is daily sent forward to stock the mills of New England. The telegraph from to-day's steamer sends the anxious buyer into market, the highest price is paid, and the farmer reaps every benefit. Fresh milk from Oakland will yet be sold in the streets of New York. We have nothing to sell, but what we have the whole Union to market it in.

Our railroads, steam vessels and telegraphs, have changed the course and character of trade. Every new facility secures new benefits for the more remote localities. Our internal and central position as a State, will yet, we have no doubt, greatly promote our prosperity. The railroads of Michigan will yet be links of that mighty chain of railroads which will cross the plains and pierce the mountains and bind together the two great oceans of the world. Over our State, perhaps, will pass the commerce of the Oriental nations; and the Celestial, a few years since a curious sight even in our great cities, will soon establish a commercial agency in our village to sell his fresh teas to our women for their butter and eggs. The Erie and Kalamazoo Railroad, from Toledo to Adrian, was the third railroad built in the United States; now the railroads of the Union in operation have a continuous length of 16,000 miles. This fact is certain: every outlet, east or west, contributes to our wealth, and the farmer, more than all other classes, reaps the benefit.

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The market of our farmers, for the future, will be controlled by the real value of their products. This fall, every agricultural product commands a higher price than heretofore. The present may be an ephemeral rise, but we think causes are at work to make a considerable advance permanent. Europe, more than ever before, depends upon us for breadstuffs, and must continue to depend upon us. The prosperity of trade, commerce, and manufactures, is drawing many from tilling the soil, to these avocations, and all combine to produce this result. As a State, there is one other advantage which we should not overlook. A great mining interest, yearly increasing in value and importance, is springing up in Michigan, which will create a large demand for our produce. This market will be constant and ever increasing. The present, therefore, cheering as it is to agricultural pursuits, points to a future still more auspicious. Labor taught by science, the strong arm guided by the intelligent head, will certainly be abundantly rewarded.

In what I have said, I have endeavored to enforce the necessity of progressing in agriculture, and of bringing to its aid those powerful auxiliaries, science and a diffused intelligence. As a people—as a State, we have felt and are feeling the progress movement. Let no one suppose we have reached the limit of advancement. When that accomplished philosopher, Galileo, proved to his and the world's satisfaction, the diurnal revolutions of the earth, and published such proof, he alarmed the ignorant priests of his day. He was thrown into prison, and at length compelled to publicly renounce his theory. Indignant that he had denied his firm conviction, he exclaimed in their very presence, stamping his foot, "And yet it moves!" There is progress all about us. "It moves!" and agriculture should feel the forward movement. To-day we separate, but it should be to carry the teachings of this Fair, *each his hint*, into practice. He who causes "two blades of grass or two ears of wheat to grow where but one grew before," is a benefactor to his race. The soil of Michigan is worthy your best efforts, and if intelligently bestowed, your rewards will be correspondent. Frugality, temperance, and virtue, will ensure to all a competency—happy homes for yourselves and your children after you.

"To thine own self be true, and keep
Thy hands from sloth, thy heart from sin;
Push on, and thou shalt surely reap
A heavenly harvest for thy toil."

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ST. CLAIR COUNTY.

CONSTITUTION OF ST. CLAIR COUNTY AGRICULTURAL SOCIETY.

ARTICLE I. This Society shall be called the St. Clair County Agricultural Society, for the promotion of Manufacturing, Mechanical, Agricultural, Pomological, and Household interests of said County, organized under an "Act for the encouragement of Agriculture, Manufacture, and Mechanic Arts," approved March 16th, 1849.

ART. II. Any person may become a member of this Society, by paying into its Treasury fifty cents on admission, and fifty cents thereafter annually, on or before the Annual Meeting, during his continuance as a member.

ART. III. The officers of this Society shall be a President, and one Vice President, in each organized township in the County; a Secretary and Treasurer, who shall, together, constitute the Executive Committee, five of whom shall constitute a quorum for the transaction of business. They shall be elected annually by a majority of the votes, and shall have power to fill vacancies in their own body.

ART. IV. The President shall preside at the meetings of the Society, and do and perform whatever pertains to the nature of his office, or that may hereafter be specified. The Vice Presidents shall assist the President in the discharge of his duties, and some one of them shall fill his place during his absence.

ART. V. The Treasurer shall keep an accurate account of all moneys that may come into his hands; pay them out on an order of the President, countersigned by the Secretary, and at each Annual Meeting, make a full and correct report, and of the affairs of the Society.

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ART. VI. The Secretary shall keep a record of all the doings of the Society, and immediately after each Annual Meeting, prepare a report of all the premiums awarded at such meeting, and publish the same in all the papers of the County.

ART. VII. The Executive Committee shall make the necessary preparations for an Annual Fair, and give sufficient previous notice of the premiums to be awarded thereat; at which time the Annual Meeting for the election of officers shall be had, and the Executive Committee shall make an Annual Report.

ART. VIII. It shall be the duty of the Treasurer, in each year, as soon as the sum of one hundred dollars shall be received by the Society, to give notice thereof to the Board of Supervisors of the County, to the end, that the amount authorized by law, may be raised by the County for the use of the Society.

ART. IX. The Executive Committee shall appoint local Committees in the various towns of the County, whose duty it shall be to obtain members; to collect all sums of money due to this Society, and perform all the labors connected with the operations thereof, in their respective towns.

ART. X. This Society shall be auxiliary to the State Agricultural Society.

ART. XI. It shall be the duty of the Executive Committee to exercise a general supervision of the affairs of the Society; to appropriate the funds of the same in such manner as shall, in their judgment, best serve the interests and advance the objects of the Society. To call all meetings; to distribute all books, plants, seeds, or other things received for the use of the Society, and also to make all necessary By-Laws and Rules for the government of the Society.

ART. XII. All Rules and By-Laws shall be submitted to and approved by the Society, at its Annual Meeting, before the same shall become operative, after the first Annual Meeting.

ART. XIII. The first Annual Meeting of the Society shall be held at the village of St. Clair, and after that at such other places as the Executive Committee shall direct.

ART. XIV. All persons resident at the time in the County of St. Clair, may become competitors for the premiums of the Society, by becoming members of the Society.

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ART. XV. This Constitution may be altered at any Annual Meeting, by a vote of two-thirds of the members present.

ART. XVI. No allowance shall be made to the officers of this Society for services rendered, except the Secretary; and the Secretary shall only receive such compensation as shall be allowed by a vote of the Society at their Annual Meetings.

I certify the foregoing to be a true copy of the Constitution of the St. Clair County Agricultural Society, as adopted at an adjourned meeting of the Society, on the twenty-second day of February, A. D. 1854.

BENJAMIN C. COX,

Sec'y of the St. Clair Co. Agricultural Soc'y.

President, James D. Brown; Treasurer, Henry Whiting; Secretary, Benjamin C. Cox.

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REPORT

OF THE SHIAWASSEE COUNTY AGRICULTURAL AND HORTICULTURAL SOCIETY.

LIST OF PREMIUMS

Awarded at the 4th Annual Fair, of the Shiawasse County Agricultural Society, held at Hartwellville on the 6th and 7th days of October, 1853:

HORSES.

Best stock horse,	A. C. Botsford, Byron,	$5 00
2d "	S. Z. Kinyon, Caledonia,	3 00
Best 3 year old horse,	G. Hickey, Bennington,	3 00
Best 3 year old mare,	E. Cook, "	2 00
Best 2 year old horse,	A. C. Cooper, "	2 00
2d "	N. G. Phillips, Shiawassee,	1 00
Best 2 year old mare,	J. M. Hartwell, Bennington,	2 00
2d "	A. Purdy, "	1 00
Best 1 year old colt,	J. M. Bardslee, "	2 00
2d "	I. Gale, "	1 00
Best spring or sucking colt,	J. M. Hartwell, Bennington,	3 00
Best breeding mare,	E. Cook, "	3 00
2d "	J. M. Hartwell, "	2 00
Best matched horses,	Wm. Frain, "	3 00
2d "	Thomas G. Chaffin, " State Transactions and	1 50

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CATTLE.

Best 3 year old bull, C. S. Johnson, Caledonia, ... $3 00
Best Durham bull, 2 years old, E. Cook, Bennington, ... 3 00
2d " J. M. Bardslee, " State Transactions, and 1 50
Best full blood Durham 1 year old, A. L. Gilbert, Caledonia, .. 2 00
2d " Thomas P. Green, Burns, .. 1 00
Best bull calf, C. S Johnson, Caledonia, ... 1 00
Best yoke working oxen, A. W. Dewey, Owosso, ... State Transactions and 2 00
2d best yoke working oxen, J. M. Hartwell, Bennington, ... 2 00
Best yoke 4 year old steers, I. Gale, " 2 00
2d " J. M. Hartwell, " 1 00
Best yearling steers well broke, S. L. Parks, Bennington, ... 1 00
Best fat cow, J. M. Hartwell, " 1 00
Best milch cow, J. M. Bardslee, " ..... State Transactions and 1 00
2d best milch cow, R. H. Root, Bennington, ... 1 00
Best 2 year old heifer, J. M. Hartwell, " 75
Best yearling heifer, Dewey & Simpson, Owosso, ... 50
2d " " ..... State Transactions.
Best heifer calf, C. S. Johnson, Caledonia, ... State Transactions.
2d " J. M. Bardslee, Bennington, ... 25

SHEEP.

Best Merino buck, French, N. T. Murdick, Burns, ... 2 00
2d " " Spanish, " " " 1 00
Best Merino buck lambs, I. Gale, Bennington, ... 1 00
Best pen Merino ewes, " " " 2 00
2d " " J. W. Brewer, " 1 50

Several other specimens of flocks were exhibited, which must be taken as the best evidence that considerable attention is paid by our farmers to this department.

SWINE.

Best breeding sow, I. Gale, Bennington, ... $1 00
Best pen of 4 pigs, under 7 months, I. Gale, ... 1 00

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BUTTER, CHEESE AND SUGAR.

Best 50 lbs. cheese, L. Lyman, Shiawassee, ... $1 00
2d " " I. Castle, " 75
Best 10 lbs. butter, P. Goldsmith, " 1 00
Best 10 lbs. maple sugar, C. R. Gilbert, Caledonia, ... 50

FRUIT.

Best lot of winter apples, I. Gale, Bennington, ... 1 00
2d " " " E. Cook, " ..... Trans.
Best 10 varieties apples, I. Gale, " 1 00
2d " " S. Frain, " 50
Best lot of pears. H. N. Deseness, Shiawassee, ... 50
2d " " I. Gale, Bennington, ... 25
Best lot of quinces, A. B. Chipman, Owosso, ... 50
2d " " A. C. Botsford, Burns, ... 25
Best lot of grapes, J. Howe, Bennington, ... 50
Best basket of peaches, H. Bardslee, Bennington, ... 50
2d " " J. W. Brewer, " 25

Much, and very fine fruit was exhibited, which proves that a reasonable attention of our farmers is directed to the above department.

FIELD CROPS.

Best lot of potatoes, half acre, L. Lyman, Shiawassee, ... $1 00
2d lot of potatoes, half acre, W. Frain, Bennington, ... 75
Best lot of corn, 80 bushels per acre, P. Goldsmith, Shiawassee, ... 2 00
Second best lot of corn, H. Bardslee, Bennington, ... Trans.

DOMESTIC MANUFACTURES.

Best 10 yards woolen cloth, P. S. Lyman, Caledonia, ... 1 00
2d " R. H. Root, Bennington, ... 50
Best 10 yards woolen flannel, P. S. Lyman, Caledonia, ... 1 00
2d " P. Goldsmith, Shiawasse, ... 50
Best 10 yards rag carpet, J. Howe, Bennington, ... 1 00
Best woolen stockings, S. Frain, " 25
2d " " " 12
Best pair cotton socks, " " 25
2d " " " 12
Best pair of Union blankets, J. W. Dewey, Owosso, ... State Transactions.

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A specimen of fine Leather, made in the county, by Aberlee & Co., Owosso, ... $0 25

One fine lot of furniture, made by John Long, of Newberg, especially a miniature bureau, for which is awarded, ... State Transactions.

FARM IMPLEMENTS.

Best 2 horse buggy, J. Spalding, Perry, ... Transactions.

Best plow, Daniel Lyon, Owosso, ... $2 00

2d " G. W. Harris, Caledonia, ... 1 50

The committee could see no difference in the manufacture of the plows, except the castings of one were worked smoother than the other, but both might be taken as models of perfection.

We would recommend the practical use of a plow as the sure test of its intrinsic merits.

GARDEN VEGETABLES.

Best peck of beans, S. L. Parks, Bennington, ... $0 25

2d " J. Howe, " ..... Transactions.

Best lot of beets, S. Frain, " 25

Best lot of Turnips, W. Frain, " 25

Best lot of squashes, I. Castle, Shiawassee, ... 25

Best 3 pumpkins, S. Frain, Bennington, ... 12

NEEDLE, SHELL, AND WAX-WORK.

Best bed quilt, J. Bridger, Perry, ... 75

2d " J. Howe, Bennington, ... 50

Best bed-spread, L. Lyman, Shiawassee, ... Trans.

Best fancy French worked collar, Mrs. T. D. Dewey, Owosso, .. 50

Best ottoman cover, Mrs. L. Lyman, Shiawassee, ... 75

2d " " Miss. E. Barnes, Owosso, ... 50

Best pin cushion, Miss L. Lyman, Shiawassee, ... 12

Best pair cake napkins, Miss J. Barnes, Owosso, ... 12

Best crochet needle-work, Miss J. Barnes, Owosso, ... 25

Best stand spread, Wm. Frain, Bennington, ... 12

Best tidy for renovater, Miss E. Barnes, Owosso, ... 12

Best monochromatic painting, Miss E. Barnes, ... 25

Best vase worsted flowers, Miss L. Lyman, Shiawassee, ... 25

Quite a gathering was collected together, by the interest shown the Society, and some good can already be seen growing out of the Annual Meeting, especially in regard to the raising of neat cattle.

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An Ayrshire bull was exhibited which was considered a model in color and form.

The Executive Committee would tender the Auxiliary Committees their best wishes for their promptness in making their reports.

The Society will be able to pay all premiums as soon as called upon, and think that a larger list and higher premiums may be taken as a rule for the coming anniversary.

The following are the officers for the coming year:

President—LUKE H. PARSONS.

Treasurer—James Cummin.

Secretary—P. S. Lyman.

Executive Committee—A. C. Botsford, E. Cook, C. S. Johnson, M. B. Martin, John W. Dewey.

P. S. LYMAN, *Secretary.*

CORUNNA, October 15th, 1853.

ADDRESS

DELIVERED BEFORE THE SHIAWASSEE COUNTY AGRICULTURAL AND HORTICULTURAL SOCIETY, AT HARTWELLVILLE.

BY L. H. PARSONS, ESQ.

Fellow Citizens:

Ladies, farmers, manufacturers, mechanics, and working men of Shiawassee county, we have met together at this time, not as the representatives of any association or body of persons, but as a primary assemblage—a Society of persons for a common purpose, to exhibit some of the choicest specimens of our own handiwork—the result of our own labor and care; to compare these as well as the different varieties of horses, cattle, sheep, swine, and fowls, belonging to the various members of this association, with one another, and to endeavor if possible, from the united labors and experience of all during the past year, to learn something which shall result in our advantage the next year, and for other future years to come.

The great object of this association and these annual exhibitions, is not the distribution of a few dollars and cents as a premium to a few

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individuals who from the creature, or article exhibited, shall be considered most worthy of a bonus from the Society. This is done only as an incentive—as a means of promoting the great ennobling objects of the association. Since the time when "the voice of the Lord God was heard walking in the garden in the cool of the day," from whose presence our federal head, conscious of their iniquity, "hid themselves among the trees," man has emphatically been compelled to labor that he may live. For his sake the ground has been cursed. Thorns and thistles it has brought forth. The herb of the field have we been compelled to eat, exhibiting the truth of the awful climax of Jehovah's sentence to apostate Adam: "In the sweat of thy face shalt thou eat bread, till thou return unto the ground, for out of it wast thou taken, for dust thou art and unto dust shalt thou return."

Whatever we eat, whatever we drink, or wear, is the result of labor, both of body and of mind; and he who attempts to live without labor is like the condemned criminal seeking to avoid the just sentence of the law by an escape from prison, adding a still higher offense to the catalogue of his crime. Of labor none need be ashamed. It is one of the conditions upon which an overruling Providence has vouchsafed to us all earthly comforts. Indeed, so conscious is man in his degenerate state, of the impossibility of avoiding so just a sentence, without at the same time involving himself still deeper in transgression, that none but the most daring and unprincipled think of obtaining a livelihood except by the sweat of the brow, through the instrumentality of labor freely bestowed. "Idleness," it has been truly said, "is the parent of many vices." It is equally true, that industrious habits leads to a thousand other virtues. The student never becomes a ripe scholar without labor. To become a good farmer, a good mechanic, a good physician, or a good lawyer, requires not only the study but the labor of years. Hence it was the remark of one of the greatest philosophers America ever produced:

> "He that by the plow would thrive,
> Must either hold himself or drive."

The idea, then, that labor is degrading, is the offspring of a vicious imagination—a suggestion to which no individual, seeking his own best interest, will ever listen. Such are the laws of physical Nature, made so by an All-wise Creator, that a certain amount of labor is indispensa-

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bly necessary, to all our mental, physical, intellectual, and moral enjoyments. There is ten thousand times more true and substantial happiness flowing to us, while we partake of the humble meal prepared by the labor of our own hands, the fruit raised by our own industry, or any of the delicacies of life, purchased by our own labor, than we can possibly receive from any of these gifts obtained in any other manner.

Time was when there were many all over this wide world, who looked upon professional life as much more honorable, and much more certain of securing to themselves wealth, the means of their support in declining years, than labor bestowed upon a farm, or in the workshop.

But thanks be to Heaven, among the masses in our own country, and especially in our own State and County, such an idea is becoming obselete. Visit, if you please, a State, a County, or a World's Fair—and will you find none there but the farmer, mechanic and the manufacturer, enjoying the pleasure to which such exhibitions give rise? Who, in all these exhibitions, exert themselves to the utmost to bring hither the best specimens of every kind exhibited? I will not pretend to draw invidious distinctions.

But I do say, and that with all due deference to the opinions of others, professional men think as much of the honor of producing the best article as the result of their own labor, as do the farmers themselves. So of the wives of these once so-called "silk stocking gentry." In this respect I can see no difference. All meet here upon a common level, for a common purpose, and all are equally anxious for the common prosperity of this Society, and that our labors as such need not be in vain. The promotion of the interest of the farmer, the manufacturer, and the mechanic, is certainly a most laudable object, and it is equallv proper here to inquire what we should do most effectually to accomplish so desirable an end.

Something less than three years ago, at a Semi-Annual Meeting of this Association, having the honor to be the speaker on that occasion, I urged, as one of the most important considerations for this Association, and for the people of this County, the absolute necessity, if we would be prosperous, of ridding ourselves of the heavy load of debt under which we were then struggling. At that time this Association had just emerged into existence. Our County at that time owed a

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municipal debt of some twelve or fifteen thousand dollars. Our farmers, many of them, had anticipated all they could raise for a long time to come, while collecting officers were eating up the very vitals of community. We had no active cash capital—no circulating medium among us. In short, everything at that time looked dark and dreary. I then urged as a means of liquidating that indebtedness, the importance of taking hold of the work with a resolution to shake off the load, accompanying works with faith, followed up by unyielding perseverance, and I assured you at that time, if this was done, the work was accomplished. I do not claim that a reformation has been effected as the result of my advice on that occasion, but I ask you to mark the contrast which has been produced in this County in the short space of three years. In that period we have nearly paid off our public debt, while at the same time, we have erected and nearly completed a good substantial Court House, with a Jail, and plenty of rooms for all our public offices, at an expense of over $6,500. The School House has been erected in almost every place in the County, where needed. Our Poor House and Jail have become tenantless. Our individual liabilities have become reduced to almost nothing. Collecting officers have been compelled to seek some other business for a livelihood. The public highways are becoming passable. We have something of a market at home, and good markets abroad, with decent roads to get there. We have many farmers among us entirely out of debt, lords of the soil they occupy, and money at interest. We now raise our own fruit; have a plenty of cattle, sheep, horses and swine to sell, and find plenty of buyers, with money in hand, to buy. We now have, not only a wheat harvest, but a wool harvest; and for every other surplus production, we can receive the money at our own doors. This great change, which has but faintly been sketched, has been brought about in the short space of three years, since the first Annual Exhibition of this Society, at Corunna, in 1850. Here is much to encourage. In the short space of three years next to come, with the same exertion, we may safely anticipate a still greater change. We say, then, in the first place, as a means of our continued prosperity as a Society, and as a community seeking the same object, let us hold on to what we have already attained. Let there be no murmurings among the different members of this Association as were witnessed in the camp of the children of Israel, because each could not have his

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own way. Should this be the case, we may depend upon it our prosperity is at an end; at least we shall have taken one step in the retrograde, which will render all the labors of the Association abortive. As in all governmental affairs, the minority must be willing to submit to be controlled by the majority. It is our duty also, at least in all ordinary cases, to meekly submit to, and quietly to acquiesce in the action and decision of the various Examining Committees of the Society. All who bring their productions here to exhibit, may not obtain the first or even the second premium. Some may go away feeling that the merits of their particular article exhibited have not been duly appreciated, and that what really belongs to them has been awarded to another; but this should not create in us a spirit of disaffection. We are bound, until the contrary be shown, to believe the judges have acted honestly, while it is easy to account for an honest difference in opinion between us and them, in the fact that so prone are we to selfishness and a bias in our own favor, no man is considered fit to be a judge in his own case. If any exhibitor goes away from this ground unawarded by the Judges, let him go home determined to bring a better sample at the next Fair. In this way we shall dry up the fountain for any discordant, jealous, or angry feelings, and shall meet again as we have hitherto, I trust met, with no other desire but to promote the best interests of the Association. The great object for which this Association should hold its Annual Fair, is improvement, that we may become theoretically and practically better farmers, mechanics, and manufacturers. It is for this purpose the premiums are awarded, not to the most deserving, but to those who are adjudged to exhibit the best article.

It is apparent that these exhibitions have been productive of a very great increase of interest in the improvement of the different breeds of stock of all kinds, and have helped very much to create a healthful spirit of emulation among our farmers, manufacturers and mechanics. Much more however can be accomplished. It cannot be denied as we go around the country that many of our farmers exhibit around them the appearance of unthrifty. There is nothing scientific or practical in all their operations. They clear off their land only to be cleared off the second time. They half fence, half plow, half drag, and half hoe. In short, they do everything at the halves, and the consequence is, they are always rewarded with a poor crop. But the result of their mismanage-

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ment does not end here. The man who is constantly raising poor crops seldom takes good care to keep them secure when gathered, and is most sure to thresh much less than he harvests. His wheat is destroyed by the rats and mice; his hay, half fenced, is eaten up by his neighbors' or his own unruly cattle; his potatoes are dug up by his swine, perhaps before they are ripe; and his garden, if any he has, is destroyed by the pesky pigs; and when the year closes in upon such a man he discovers to his own shame that he has nothing in store for the support of himself and family during the coming year, but his own strength nearly exhausted. If such a man would only review his steps during the past year, he would learn the reason why his neighbor is so much more prosperous than he is. He would see that his neighbor plows deep and fine, and in season. That his land is thoroughly dragged and hoed—his fields are well fenced, and all his crops are well taken care of; and that as the result of this care and good husbandry, he has enough to eat, drink, and to wear, laid up in store for the coming year; he would see that his own poverty is not the result of idleness, but of mismanagement, of bad husbandry, of doing everything by halves; whilst his neighbor's is crowned with plenty as the legitimate fruits, not of hard labor, but of good management, good husbandry, and of doing everything as it should be done, in a workmanlike manner. In other words, he would see why his neighbor is thirfty and he is unthrifty.

I know a man who came into this County about seventeen years ago with a cash capital and other means to the amount of at least $8,000. For convenience sake I will call his name Unthrifty. He has cleared up what he calls a large farm. The soil is naturally productive—as good as can be found in the county. He commenced his farming operations by the erection of a log house in which he still lives, but which has never been finished, and when it rains, is about as much a covert from the storm as an oak girdling, and he wonders that his family are always sick. When he chops down the forest to clear up, all the small timber is cut so high he is compelled to drag around the stumps instead of over them; here and there in every direction is left a standing tree or a stub, as a harbor for the birds or a lasting monument of the soil's original productiveness, and here and there scattered all over the fields, are as many brands and old logs still remaining upon the ground as would satisfy any person that because the land of Unthrifty was free

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from stones, he was determined always to plow among the logs. He prepares his rails for a fence of as many varieties in length as the number of logs out of which they are split, and they are laid up at random, with panels from 4 to 10 rails high, just as a careless man happened to scatter them along the line of the lot, and most assuredly the fence is laid in as many directions as there are points of compass. His stumps are never sprouted, and the fields he first pretended to clear can only be used for a pasture, and look more like what is commonly called brush land than they do like a white man's improvements. Wherever he plows the stumps and grass occupy the land upon shares, so that the passer-by can hardly tell whether the ground is meadow or plow-land; he never raises more than half a crop and seldom saves half he raises; his horses, cattle, sheep, and swine, are all of an inferior kind—diminutive in size, half kept, and for the expense in raising them, Unthrifty is never more than half rewarded. The wheat which Unthrifty sows—for he always has to buy his seed—is of the foulest kind, such as he can buy the cheapest; and his corn is so mixed it is impossible to tell to what genus it belongs. Unthrifty has always labored hard, has had an industrious, saving and prudent wife, but is at this time a bankrupt for thousands; he is always talking about his bad luck—his misfortunes, and would doubtless be offended if you should tell him he was the author of the whole. I know another man who settled in this county some 15 years ago, with a capital of one quarter section of land, of a soil no better than that of Unthrifty's. In that brief period, Thrifty, for so I will call his name—has cleared and fenced into beautiful fields, more than 100 acres of land; he has a fine orchard, a good dwelling house, good barns and barn-yards, good fences, and he always raises good crops, has a place for everything and everything in its place; has added farm to his farm—owes no man anything, and has money at interest. Nor is this all; his horses, cattle, sheep, and swine, are all of the improved kinds; and all his farming utensils are proof of one important fact, that this man is well posted up in regard to every important improvement pertaining to his calling, and that he has expended much to avail himself of these blessings. This comparison of Thrifty and Unthifty might be extended into every department of Agricultural, Mechanical, and Manufactural employment, but the task I leave for my hearers.

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Suffice it to say, from what has already been said—from the contrast already drawn, I would urge the importance of doing things well, of doing everything in the season for doing it, and of taking more pains in the improvement of our stock; of selecting none but the best of samples for seed; and of purchasing as implements of husbandry, and of the various occupations you pursue, none but the most improved articles. Good farming makes good farms and rich farmers. Good mechanism finds a good market and plenty of employment. It costs no more to raise a bushel of pure wheat than it does of foul; no more to raise a blooded cow worth $30 than it does an inferior one worth but $15. It takes just as long to plow an acre with a bad plow poorly, as it does to plow the same land with a good plow in a workmanlike manner. None of these suggestion are new, but nevertheless they are worthy of consideration.

Ladies and gentlemen, of the display made here on this occasion, you need not be ashamed. Seldom at an exhibition like this in a county so new, so recently poverty stricken and bankrupt, can such a grand display be made of such fine horses, such beautiful cattle, such fine wooled sheep, or such an excellent variety of the various articles included in the list of premiums awarded on this occasion.

Let us return to our respective places of abode, feeling that it has been good for us that we have been up hither, and with the full determination that we will become better farmers, better mechanics, and better manufacturers; that we will raise better stock, and better grain; that we will make better butter, better cheese; that we will make better manufactured articles of every kind. In short, that we will become better husbands, better wives, better fathers, and better mothers, (and may I not say to the young who are now listening to me,) better sons and better daughters.

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REPORT

OF THE VAN BUREN COUNTY AGRICULTURAL SOCIETY.

J. C. Holmes, Esq., *Sec'y Michigan State Agricultural Society:*

Sir—I have the honor to transmit to you the Third Annual Report of the transactions of the Van Buren County Agricultural Society, for the year 1853.

Our County is small in population, compared with many other Counties—perhaps not exceeding 8,000 inhabitants; our Society is only in its third year of existence, and numbers one hundred and twenty members.

Indeed, many of our farmers have considerable to do in clearing up their farms and erecting suitable habitations to live in, without making brilliant experiments in agricultural science. It will not be expected, therefore, that our Reports will be very interesting.

Our Executive Committee met early, and published a list of premiums, amounting to $134.

The people of the village of Paw Paw having generously contributed $75 00 to the Society, therefore the Fair was held in that place. The Court-room of the Court House, was fitted up for Domestic Manufactures and Fine Arts, and a building was erected for the display of Fruit, Vegetables, Butter, Cheese, Honey, &c., which was well filled.

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For a description of the Fair, I enclose the following extract, together with the premiums awarded, Annual Meeting, Reports of Committees, &c.

Yours respectfully,

WM. H. HARRISON,

Sec'y Van Buren County Agricultural Soc'y.

PAW PAW, January 28, 1854.

LIST OF PREMIUMS

Awarded at the Third Annual Fair of the Van Buren County Agricultural Society, held at Paw Paw, on the 13th and 14th of October, 1853:

FARMS.

Best farm containing 80 acres, all under cultivation, Henry Wilson,	$3 00
A farm containing 80 acres, 60 under cultivation, Hiram Mather,	2 00

Both farms in LaFayette; no others competing with them.

CATTLE.

Best working oxen, 7 years old, T. B. Irwin,	2 00
2d " " 8 " J. R. Monroe,	1 50
Best " " 4 " J. Campbell,	1 75
2d " " " " O. Sisson,	1 25
Best pair 3 year old steers, Charles P. Sheldon,	1 50
2d " " " Oliver Warner,	1 00
Best pair 2 year old steers, John Lyle,	1 00
2d " " " Orrin Sisson,	75
Best yearling, Abram Ives,	75
2d " Charles P. Sheldon,	50
Best single steer 3 years old, Orrin Sisson,	75
Best " 1 year old, O. Sisson,	25
Best bull, 4 years old, Charles P. Sheldon,	1 00
2d " 4 " J. R. Monroe,	75
Best " 2 " E. Branch,	75
2d " 2 " D. Morris,	50

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Best bull 1 year old, Orrin Sisson,	$0 50
2d " 1 " B. Reynolds, Jr.,	25
Best cow 5 years old, W. Durkee,	1 00
2d " 5 " J. R. Monroe,	75
Best cow 3 years old, Charles Selleck,	1 00
2d " 3 " Morgan L. Fitch,	75
Best 2 year old heifer, Richard Hutchins,	75
2d 2 " " Samuel Lull and J. R. Monroe, each 50c,	1 00
Best yearling heifer, O. Sisson,	50
2d " " John Lyle,	25
Best bull calf, Orrin Sisson,	50
2d " Isaac Doughty,	25
Total,	$23 50

HORSES.

Best stallion 4 years old or over, Orris Church,	3 00
2d " C. G. George,	1 50
Best stallion 3 years old, Samuel Manley,	1 50
Best stallion 2 years old, John Southard,	1 50
2d " Thomas Clark,	1 00
Best stallion 1 year old, H. Clark,	1 00
2d " Joseph Kinney,	75
Best stallion colt under 1 year old, 1st premium, T. Conklin,	75
2d " Samuel Lull,	75
Best brood mare with foal at her side, R. Morrision,	1 75
2d " A. B. Covey,	1 50
Best mare 4 years old or over, D. Morris,	1 75
Best mare 3 years old or over, Alexander Sloan,	1 50
2d " Henry Barnum,	1 00
Best mare 2 years old or over, Joseph Gilman,	1 50
2d " F. C. Annable,	1 00
Best mare 1 year old or over, J. A. Ranney,	1 25
2d " R. Hutchins,	75
Best mare under 1 year old, R. Morrison,	1 00
2d " Thomas Clark,	75
Best single horse, 4 years old or over, Jason A. Sheldon,	1 75
2d " J. A. Ranney,	1 50

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Best single horse 3 years old, J. Pelton,	$1 50
Best " 2 years old, Henry Barnum,	1 50
2d " Freeman Hall,	1 00
Best carriage horses, A. T. Norton,	2 00
2d " Wm. Fox,	1 50
Best draught horses, Dyckman, Sturges, & Co.,	2 00
2d " Hiram Mather,	1 50
Best matched colts 2 years old, Joseph Gilman,	2 00
Best matched colts 1 year old, Wm. Markley,	1 50
Amount of premiums,	$41 75
James Prater, Discretionary premium,	1 50
Total,	$43 25

SHEEP.

Best buck, John Harwick,	1 50
2d " Edwin Barnum,	1 00
Best five lambs, E. Barnum,	1 50
2d " N. M. Pugsley,	1 00
Total,	$5 00

Remarks—Little or no competition in this class.

SWINE.

Best boar, Thomas Conklin,	2 00
2d " Edwin Barnum,	1 00
Best sow, A. S. Downing,	2 00
2d " C. G. George,	1 00
Best 5 pigs, A. S. Downing,	2 00
One fat hog, J. Palmer, Discretionary Premium,	50
Total,	$8 50

Remarks—Little or no competition in this class.

FRUIT.

Best winter apples, 24 varieties, M. L. Fitch,	50
2d " " (good,) Daniel Abbott,	25
Best fall apples, various kinds, John Lyle, Jr.,	50
2d " " (very fair,) Charles M. Morrill,	25
Best pears, no competition, U. C. Lee,	50

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Best quinces, no competition, F. C. Annable,	$0 25
Best grapes, Mrs. H. W. Rhodes,	25

DISCRETIONARY PREMIUMS.

Best peaches, R. J. Merrill,	50
2d " N. M. Pugsley,	25
Best water-melons, O. Church,	25
2d " Isaac Doughty,	25
Best musk-melons, S. Hoppin,	25
Best citrons, Edgar Crane,	25
Best gooseberries, Mrs. W. K. Butler,	25
Best apples, natural fruit, (first rate,) D. A. Alexander,	25
Best apples, (cultivated good,) D. Morris,	25
Total,	$5 00

Remarks—Eighteen competitors for premiums for apples; other fruits, little or no competition.

MECHANICS' WORK.

Best cabinet work made by exhibitor, J. Palmer,	$0 50
Best two-horse lumber wagon, C. Hawley,	1 00
Best plow, Stewart & Conger,	50

DISCRETIONARY PREMIUMS.

Spinning wheel and reel, Jonas Davis,	50
Two picture frames, S. Godfrey,	50
One daguerrean portrait, S. Godfrey,	50
Total,	$4 00

Remarks—No competition.

NEEDLE AND FANCY WORK, MADE BY EXHIBITOR.

Best quilt, Mrs. J. M. Brown,	1 00
2d " Mrs. U. C. Lee,	65
Best painting, Miss P. Godfrey,	50
Best fine needle work, (3 articles,) Mrs. Eliza Stewart	75
Best flowers, two kinds, worsted and tissue, Miss Irene P. Simmons	50

DSCRETIONARY PREMIUMS.

Worsted embroidery, Miss I. P. Simmons,	25
Hair wreath, Miss Helen M. Stewart,	25

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Fancy card basket, Ada Fitch,	$0 25
Book mark, Misses Ursula and Lucy Conger,	25
Lace collar, Mrs. M. L. Fitch,	25
Perforated paper, Miss Phœbe Godfrey,	25
Quilt, Miss L. B. Bangs,	1 00
Quilt, Mrs. D. Woodman,	75
Counterpane, Mrs. A. Warner,	50
Stand coth, Mrs. J. Entrican,	25
Total,	$7 50

Remarks—16 quilts entered—little competition in other articles.

CLOTH, CARPETING, HOSIERY, &C.

Best flannel, no competition, Mrs. A. Warner,	$1 00
Best woolen cloth, Mrs. A. Warner,	1 00
Carpeting—2 yards rag, S. Bangs,	50
2d " Committee reported no No.; 6 pieces were exhibted,	25
Best yarn, (1 skein woolen,) no competition, Mrs. Annable,	50
Best stockings, (woolen,) Mrs. Annable,	25
Best socks, (woolen,) Mrs. Barnum,	25

DISCRETIONARY PREMIUMS.

One pair cotton stockings, Miss Polly Engle,	25
One rug, Mrs. C. Guiles,	25
Three rugs, one foot cushion, Mrs. C. M. Moarill,	25
One piece diaper, home made, Mrs. Fox,	50
Total,	$5 00

Remarks—No competition except carpets and rugs.

BUTTER, CHEESE, BREAD, HONEY, AND MAPLE SUGAR.

Best cheese, Mrs. E. Branch,	1 00
2d " No. 14—no cheese entered in that No., it should be No. 12 or No. 13,	75
3d best cheese, E. Branch,	50
Best butter, O. Sisson,	1 00
2d " B. Hall,	75
3d " R. M. Haynes,	50
Best honey, A. F. Moon,	1 00
2d " S. Godfrey,	50
Best bread, Mrs. A. Warner,	50

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Best maple sugar, John Lyle,	$1 00
2d maple sugar, D. T. Fox,	75
3d " " J. Lyle, Jr.,	50
Best two samples of flour, J. Palmer,	50

DISCRETIONARY PREMIUMS.

Bread, Mrs. W. K. Butler,	25
Honey, H. Dowd and O. Warner, (25 cents each,)	50
Butter, S. Lull, C. D. Grimes, T. Conklin, and D. Woodman, (25 cents each,)	1 00
Total,	$11 00

Remarks—14 specimens of butter entered.

POULTRY.

Best two geese, no competition, Isaac Barnum,	50
Best six ducks, " " I. Doughty,	50
Best two turkeys, no " I. Doughty,	50
Best improved fowls and one Dorking cock, A. F. Moon,	50
Best Dorkings, 4 pair, 3½ months old, A. Sherman,	50

DISCRETIONARY PREMIUMS.

Shanghais, 1 pair, 4 months old, A. Sherman,	50
Five chickens, A. F. Moon,	25
Polands, two pair, S. G. Butler,	50
Dorkings, 3 pair 6 months old, H. Jacobs,	25
Total,	$4 00

Remarks—Little competition in this class.

GARDEN VEGETABLES.

Best flat turnips, one dozen, Samuel Hoppin,	$0 25
Best ruta bagas, " W. Prater,	25
Best beets, one dozen, S. Hoppin,	25
Best carrots, " " "	25
Best cabbages, half dozen, L. D. Case,	25
Best garden beets, M. Leighty,	25
Best sample onions, S. W. Bancroft,	25
Best red peppers, S. Hoppin,	25
Best squashes, S. Hoppin,	25

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Best pumpkins, R. Hutchins,	$0 25
Best parsnips, D. T. Fox,	25

DISCRETIONARY PREMIUMS.

White ruta bagas, D. T. Fox,	25
Onions, 1 dozen, " "	25
Two gourds, S. Hoppin,	25
Four cabbages, Wm. Prater,	25
Belgian carrots, " "	25
Mangle Wurtzel beets, J. Lyle,	25
Sweet potatoes, A. Barney,	50
Total,	$4 75

Remarks—Considerable competition in this class.

FIELD CROPS.

Best half bushel ears of Indian corn, D. T. Fox,	50
Best half bushel wheat, B. Hall,	50
" beans, S. G. Butler,	50
Best acre of indian corn, 106 bushels, C. G. George,	2 00
2d " 99½ bushels, E. Barnum,	1 50
2d best acre of hay, 5,487 lbs., O. Sisson,	2 00
Discretionary Premium, J. Lyle Jr.,	
" 3 tons, S. Hoppin.	
2d premium, half acre potatoes, 90 bushels, C. P. Sheldon,	1 00
Total,	$7 50

1st premium that committee reported on potatoes, was not entered on the book.

No entries for best acre of wheat.

There is one entry for best acre of oats, but not reported.

Number of entries in this class—samples of wheat, 5; corn, 7; oats 1; potatoes, 7; beans, 2; rye, 1.

The best acre of corn, 5 entries; best acre of oats, 1; best half acre potatoes, 4 entries; best acre of hay, 2 entries.

COMMITTEES.

On Farms—J. Andrews and H. Barnum.

On Cattle—Alva Stevens, J. Ranney and C. P. Sheldon.

On Horses—T. Conklin, Wm. Hill and P. Harwick.

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On Carriage Horses—E. Durkee, T. B. Irwin.

On Sheep—M. L. Fitch, D. Morris, E. Smith.

On Swine—Allen Kinne, H. Mather, H. Dowd.

On Field Crops—Orrin Sisson, E. T. Spencer, D. T. Fox.

On Vegetables—S. Hoppin, N. S. Marshall, C. G. George.

On Fruit—Eaton Branch, George Smith.

On Butter, Cheese, &c.,—P. Haydon, Mrs. Catharine Orr, Mrs. H. W. Rhodes.

On Mechanic's Work—C. Cross, H. L. Eggleston.

On Domestic Manufactures—Horace Bonfoey, Mrs. W. K. Butler, Mrs. B. Sherats.

On Needlework, &c.,—Mrs. M. L. Fitch, Mrs. E. T. Spencer, Mrs. J. Gilman.

On Poultry—Henry Barnum, R. B. Lane.

Two beautiful stallion horses—one owned by A. Y. Moore, of Schoolcraft, and the other by Mr. Towers, attracted considerable notice and are worthy of mentioning.

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ANNUAL MEETING OF THE SOCIETY, HELD OCT. 14TH.

The meeting being called to order by the President, Mr. Annable pronounced a brief but eloquent address on farming, and was followed by Mr. Haydon, with some humorous remarks in relation to the farmer's position in society. Mr. Durkee then offered a resolution, prefaced by remarks in favor of a plowing match to be held Saturday, the 22d day of October, which was adopted. The President, Judge Monroe, made the closing speech in an excellent manner, in relation to the affairs of the Society, declining the honor of serving as President, the succeeding term. The election of officers then took place, which resulted in the choice of the following persons, who compose the Executive Committee:

President—JOSEPH GILMAN.

Secretary—Wm. H. Harrison.

Treasurer—E. Mather.

Executive Committee—Jay R. Monroe, Arch. Stewart, C. P. Sheldon, E. Barnum, B. Hall.

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Afterwards, the reports were read, and the meeting adjourned till next day. The Executive Committee met on the 15th and allowed bills in favor of E. Barnum for labor and material furnished on Fair grounds, seven dollars and eighteen cents; Joseph Gilman, for lumber and labor, fifty-eight dollars and sixty-four cents; Wm. Hill four dollars; E. Mather, sixty cents; S. T. Conway, eleven dollars; Mrs. Johnson, one dollar and twelve cents. Total, eighty-two dollars and fifty-four cents. The Executive Committee adjourned to meet at the plowing match.

The Executive Committee met on the afternoon of the 22d of October. Present—all the members except Mr. Sheldon. It was resolved to allow discretionary premiums to

John Lyle, for one acre of corn—112 bushels, ... $2 00
John Andrews, for two calves, ... 50

It was resolved to hold the annual meeting of the Executive Committee, at the Court House, in Paw Paw, on the 31st day of December, at 9 o'clock A. M., and that the members of the Society be invited to be present and take part in the discussions.

The President then appointed the following Committees:

On the time and place of holding the next Fair—Messrs. Sheldon and Stewart.

Preparations for the Fair, and By-Laws—Messrs. Barnum and Monroe.

Premium List and Judges—Messrs. Gilman and Mather.

Annual report for this year—Messrs. Hall and Harrison.

These committees to report at the annual meeting, Dec. 31st. The Executive Committee then adjourned.

Premiums will be paid by the treasurer at the Register's office, and errors that may be discovered will be corrected at the next meeting of the Executive Committee.

W. H. HARRISON, *Sec'y.*

REPORTS OF THE COMMITTEES.

The Committee on Farms have had only two applications, both of which are in the township of LaFayette. These farms do not come in competition, as one belongs to class one, and the other to class two.

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Henry Wilson has a farm of eighty acres, the whole under good improvement, and in our opinion he is entitled to the first premium in class first.

Hiram Mather has a farm of eighty acres, sixty of which is in a high state of cultivation. This farm should draw the first premium in class second.

J. ANDREWS,
H. BARNUM,
Committee.

—

We, the undersigned Committee, appointed to examine fancy horses, beg leave to report as follows: We have examined all carriage horses, and report that No. 24, class 3, is the best matched team, and are entitled to the first premium. Said team belong to A. T. Norton. The second premium is awarded to Mr. Fox, No. 2.

And this committee further report, that J. A. Sheldon is entitled to the first premium on single horse, No. 1. James Prater the second premium on single horse, No. 30.

E. DURKEE,
T. B. IRWIN,
Committee.

—

The committee on sheep, report that as far as they have been able to ascertain by such information as was readily accessible to them, the number of sheep entered for premiums by members of the Society was small. As their committee book, handed them just before commencing an examination, contained neither instructions nor a list of entries in their department, they had only the cards attached to or placed near the animals, as a guide in respect to the proper entries. With the best light they had on the subject, and keeping within what they supposed would have been their instructions, had they been furnished with any, they have awarded premiums as follows:

No. 3. Best buck, first premium.
No. 4. Second best buck, 2d premium.
No. 4. Best 5 lambs, 1st premium.
No. 2. Second best 5 lambs, 2d premium.

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After a pretty thorough hunt and examination of posts and fences, the Committee came to the conclusion that there were probably no entries of ewes.

There were some very fair Foreign sheep on the ground. But as we were furnished with neither names or marks, we do not find it convenient to designate any for especial commendation.

Your Committee regret that a larger number of good sheep, which they believe are owned by our own citizens, were not presented for exhibition.

All which is respectfully submitted.

M. L. FITCH,
D. MORRIS,
E. SMITH,
Committee.

The Committee appointed by the members of of the County Agricultural Society, to whom was consigned the duty of determining upon such domestic articles as were submitted to their inspection, have performed that duty to the best of their ability, and they ask leave most respectfully, to report their action; and will say, that after a careful examintion, they have come to the conclusion that cheese No. 19, is entitled to the first premium, and therefore recommend that it be bestowed; 2d best, No 14, 2d premium; 3d best, No. 19, third premium. Butter—a variety of specimens were presented, all of superior quality, which do impart credit to the manufacturers. Your Committee recommend that to No. 9, be awarded the first premium; No. 21, 2d premium; No. 13, 3d premium.

They also recommend discretionary premiums on Nos. 23, 10, and 14, as being well deserving. Best sample of honey, No. 4; second best, No. 2; also discretionary premiums on Nos. 22 and 11. Best sample of bread, No. 12, a superior specimen, and richly entitled to first premium. No. 17, also, an excellent article, 2d premium. Best maple sugar, No. 7, 1st premium; 2d best, No. 6, 2d premium. Flour, none presented.

Your Committee would strongly recommend a lot of butter, No. 18, for a discretionary premium, which came in after the Committee had passed upon specimens present.

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Your Committee have now discharged all the duties that legitimately devolve on them, but feel that they cannot dismiss this subject without paying a well deserved tribute to the ladies of Van Buren County, for the rapid progression towards perfection, in all that pertains to domestic comfort and improvement in their sphere. All of the articles presented to your Committee, were of a superior order, seldom equalled, and never surpassed; and we say, if the ladies will pursue their rapid improvement, in a very short time, perfection, in their department, will have reached its utmost limits.

All of which is most respectfully submitted.

CATHARINE ORR, *Ch'n of Com.*

N. B.—Your Committee would call the attention of the Executive Committee to the fact, that there was one specimen of sugar, No. 20, which was misplaced, and was not discovered until the above Report was made, which your Committee believe to be the finest specimen on the ground, and recommend that you give it a favorable consideration.

The Committee on Needle and Fancy Work, report that from the brief time allowed to them to examine a great of variety of articles, amid the importunities of a crowd, they have, acting on their best judgment, under such unfavorable circumstances, awarded premiums as follows:

Best quilt, No. 1, first premium; second premium, Nos. 5, 8 and 6, discretionary premium.
Pencil drawing, No. 4, first premium.
Lot No. 1, muslin collars, sleeves, cuffs and pocket handkerchiefs, first premium.
Lace collar, No. 6, first premium.
Stand cloth, No. 7, "
Worsted embroidery, No. 10, first premium.
Hair wreath, No. 2, first premium.
Perforated paper, No. 8, first premium.
Fancy card basket, No. 6, first premium.
Book mark, No. 3, discretionary premium.
Counterpane, No. 18, " "
Bouquet worsted flowers, No. 10, first premium.
Bouquet paper flowers, No. 10, " "

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Your Committee will only add, that in the absence of any instructions, they have awarded first, second, and recommended discretionary premiums, as in their opinion the several articles deserved.

All which is respectfully submitted,

MRS. M. L. FITCH,
MRS. E. T. SPENCER,
MRS. J. GILMAN,
Committee.

Pursuant to a vote of the Van Buren County Agricultural Society, at the last Annual Meeting thereof, there was held a Plowing Match, near the village of Paw Paw, on Saturday, the twenty-second day of October, 1853.

The Commiitee on Plowing, at said Match, report that the competitors for the premiums at the Plowing Match, were E. T. Spencer, S. Smiley, Wm. Blades, Thos. Blades, Thos. Threadgold, John Pelton, S. Murch, B. Murdock, and John Cook.

The ground was selected and arranged for plowing, by the Committee of Arrangements.

The competitors were required to plow ¼ of an acre in one hour; and all completed their work within the time allotted to them. Thomas Threadgold's team plowed quarter of an acre in 54 minutes, the workmanship, considering the dry state of the ground, first rate. The Committee award to him the 1st premium, $5.

Sam. Smiley's team plowed quarter of an acre in 57 minutes; the plowing was done good. The Committee award to him the 2d premium, $3.

The Committee recommend that Wm. Blades, Thos. Blades, and John Cook, be each awarded a bound volume of the Michigan Farmer; we think they did themselves much credit as plow-boys.

Taking all things into consideration, the Committee are of the opinion, that all of the competitors, (with a very small exception,) did themselves a good deal of credit, as plowmen and farmers.

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The Committee would also recommend that the Society encourage Plowing Matches.

All which is respectfully submitted.

C. G. GEORGE,
J. ANDREWS,
H. BARNUM,
J. A. SHELDON,
Committee on Plowing.

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REPORT

OF THE WASHTENAW COUNTY AGRICULTURAL AND HORTICULTURAL SOCIETY, FOR 1853.

J. C. HOLMES, Esq., *Secretary Michigan State Agricultural Society:*

SIR—It becomes my duty to make a report of our Society for 1853. I take great pleasure in saying that our Society is in a prosperous condition, being free from debt, with a small amount of funds on hand with which to commence the operations of another year. Our great prosperity is owing mainly, no doubt, to the interest taken in the Institution by the farmers and mechanics of our county. We can see no reason why our prosperity may not only continue, but constantly increase, in proportion to the increase of wealth and prosperity of the county. Our Society, in its origin, was limited in its means, and of course in influence; but now, with increased means, its influence is felt in the agricultural and manufacturing interests of the county, far beyond the fondest hopes of the few friends of the enterprise, who first put their hands to the work. The number of entries was 1050.

L. DAVIS, *Secretary.*

The following are the officers elected for the ensuing year:

President—WILLIAM FINLEY—Ann Arbor.

Vice Presidents—B. Follett—Ypsilanti.

J. R. Wallace—Pittsfield.

H. G. Noble—Dexter.

D. Hixon—Bridgewater.

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Secretary—L. Davis—Ann Arbor.
Treasurer—William Burnett—Scio.
Executive Committee—J. B. Vannatta—Salem.
J. G. Leland—Northfield.
J. B. Arms—Webster.
E. Arnold—Dexter.
J. R. Yocum—Lyndon.
W. F. Hatch—Sylvan.
A. Williams—Lima.
H. Arnold—Scio.
O. White—Ann Arbor City.
E. M. De Forest—Ann Arbor.
George Gale—Superior.
D. M. Uhl—Ypsilanti.
S. G. Rowley—Pittsfield.
E. Eddy—Lodi.
E. Haine—Freedom.
O. Kellogg—Sharon.
W. S. Karr—Manchester.
D. W. Palmer—Bridgewater.
S. G. Haight—Saline.
D. Carpenter—York.
J. W. Childs—Augusta.

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LIST OF PREMIUMS

Awarded at the Annual Fair of the Washtenaw County Agricultural and Horticultural Society, 1853:

CLASS I.—SHORT HORNED DURHAMS.

Best bull 3 years old and over,			D. W. Palmer, Bridgewater,	$5	00
2d	"	"	"	D. M. Uhl, Ypsilanti,	3	00
3d	"	"	"	Jotham Goodale, Superior,	1	00
Best bull one year old,			Geo. Rash, Ann Arbor,	2	00
2d	"	"	John Tooker, Ypsilanti,	1	00
3d	"	"	M. Clawson, "		75

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Best bull under one year, John Starkweather, Ypsilanti, ... $1 00
2d " " Ira Wood, Lodi, ... 75
3d " " Geo. Rash, Ann Arbor, ... 50
Best cow three years old and over, John Starkweather, Ypsilanti, ... 5 00
Second best cow three years old and over, Jotham Goodale, Superior, ... 3 00
Third best cow three years old and over, Florus Finley, Ann Arbor, ... 1 00
Best heifer one year old and over, Jotham Goodale, Superior, ... 2 00
Second best heifer one year old and over, John Tooker, Ypsilanti, ... 1 00
Third best heifer one year old and over, Jotham Goodale, Superior, ... 75

Your Committee beg leave to report that under this class there were many very fine specimens offered for competition, and they were greatly surprised at the interest taken in the improvement of this eminently popular breed of cattle.

The competitors for premiums, under this class, are worthy of great praise, for by their exertions they show a decided improvement over the last year's exhibition—and this is more readily seen in the young stock.

The calves exhibited were all very fine; and indeed so great was the intrinsic worth of each animal, that your Committee found much difficulty in awarding the premiums.

CLASS II.—DEVON CATTLE.

Best bull three years old and over, J. W. Childs, Augusta, ... $5 00
3d bull two years old, J. P. Gillett, Sharon, ... 2 00
Best cow three years old and over, J. W. Childs, Augusta, ... 5 00
Best cow one year and over, " " " 2 00
Best cow under one year, " " " 1 00

CROSS BLOODS—ADDITIONAL.

Best bull three years old and over, Thomas H. Bradley, York, 5 00
2d " " " Wm. Jones, York, ... 3 00

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Best cow three years old and over, D. M. Uhl, Ypsilanti, ... $5 00
2d " " " J. B. Arms, Webster, ... 3 00
3d cow over two years old, " " " 3 00

The best of Devons, and the cross of Devons and Durhams, made your Committee regret that there was no competition. The animals exhibited were all very excellent specimens of their respective classes; and we also regret that the limits of the Society would not allow premiums to many worthy animals that came under our inspection.

We congratulate the Society on the very large increase of cross and full blooded animals over former years, and regret that a difference of opinion exists in regard to the merits of cross blood animals.

Your Committee would also say that purchasers of animals cannot be too tenacious in their requirement of testimonials of purity of blood, as salesmen frequently take advantage of the unwary, to pass off cross bloods for pure stock.

CLASS III.—NATIVES AND GRADES.

Best 3 year old bull, George McCormick, Superior, ... $5 00
2d 2 " G. W. Wheeler, York, ... 3 00
Best bull calf 1 year old, Prince Bennett, Augusta, ... 1 00
2d " " C. J. Wheeler, York, ... 75
3d " " Uri Isbell, Lodi, ... 50
Best cow 3 years old and over, Samuel Casey, Superior, ... 5 00
2d " " " D. M. Uhl, Ypsilanti, ... 3 00
3d " " " " " " 1 00
Best 2 year old heifer, D. W. Palmer, Bridgewater, ... 3 00
2d " " D. M. Uhl, Ypsilanti, ... 2 00
3d " " Grove Spencer, " 1 00
Best 1 year old heifer, E. DeForest, Ann Arbor, ... 2 00
2d " " D. M. Uhl, Ypsilanti, ... 1 00
3d " " " " 75
Best heifer calf under 1 year old, D. M. Uhl, Ypsilanti, ... 1 00
2d " " " " " 75
Best pen of four calves, D. M. Uhl, Ypsilanti, ... 3 00
2d " " Jotham Goodale, Superior, ... 2 00
3d " " " " 1 00

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CLASS IV.—WORKING OXEN AND STEERS.

Best yoke of oxen,	Heman Ticknor, Pittsfield,	$5 00
2d " "	O. White, Ann Arbor,	3 00
3d " "	H. Compton, Ypsilanti,	1 00
Best 5 yoke of oxen from one town,	Heman Ticknor, Pittsfield,	5 00
Best 4 year old steers,	J. Starkweather, Ypsilanti,	4 00
2d " "	G. Spencer, "	2 00
3d " "	" "	1 00
Best 3 year old steers,	W. H. Richardson, Ann Arbor,	3 00
2d " "	G. Spencer, Ypsilanti,	2 00
3d " "	H. E. Spaulding, Augusta,	1 00
Best 2 year old steers,	A. Cross, Ypsilanti,	2 00
2d " "	" "	1 00
3d " "	James Hutchinson,	75
Best 1 year old steers,	D. M. Uhl, Ypsilanti,	2 00
2d " "	" "	1 00
3d " "	" "	50

CLASS V.—FAT CATTLE.

S. W. Bowers,	Superior, 1st premium,	3 00
" "	2d "	2 00

CLASS VI.—HORSES.

Best stallion 4 years old and over,	E. Arnold, Dexter,	6 00
2d " "	M. Clawson, Ypsilanti,	5 00
3d " "	J. Simmons, "	4 00
4th " "	C. G. Wheeler, "	3 00
5th " "	W. H. Mills, Bridgewater,	2 00
Best stallion 3 years old,	A. Clover, Saline,	5 00
2d " "	J. Bramam, York,	4 00
3d " "	T. P. Bradley,	3 00
Best stallion 2 years old,	William Isbell, Lodi,	4 00
2d " "	E. W. Whitmore, Pittsfield,	2 00
3d " "	Monroe Crane, York,	1 00
4th " "	Thomas P. Bradley, York,	75
Best stallion 1 year old,	C. Cram, Pittsfield,	3 00
2d " "	E. M. Comstock, Ypsilanti,	2 00

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Best matched horses 4 years old and over,	H. Welch,	Ypsilanti,	$6	00
2d	"	"	"	J. Kellogg,	"	5	00
3d	"	"	"	F. Bennett,	Superior,	4	00
4th	"	"	"	J. B. Vannatta,	Salem,	2	00
5th	"	"	"	S. J. Freeman,	Medina,	1	00
Best matched horses 3 years old,	G. Spencer,	Ypsilanti,	5	00
2d	"	"	D. B. Rorison,	Pittsfield,	4	00
3d	"	"	H. H. How,	Lodi,	3	00
4th	"	"	M. Clawson,	Ypsilanti,	2	00
Best mare with foal at foot,	Isaac Dunn,	Ann Arbor,	5	00
2d	"	"	J. Summer,	Saline,	4	00
3d	"	"	O. White,	Ann Arbor,	3	00
4th	"	"	A. Cole,	York,	2	00
5th	"	"	F. A. Fellows,	Lodi,	1	00
Best mare 3 years old,	Geo. McKim,	Superior,	5	00
2d	"	"	J. Kellogg,	Pittsfield,	3	00
3d	"	"	W. Wilson,	"	2	00
4th	"	"	H. Drury,	"	1	00
Best mare 2 years old,	D. Showerman,	Ypsilanti,	4	00
2d	"	"	J. Rorison,	"	3	00
3d	"	"	E. C. Peck,	"	2	00
4th	"	"	M. A. Howland,	"	1	00
Best mare colt 1 year old,	John Allen,	Ypsilanti,	3	00
2d	"	"	D. M. Uhl,	"	2	00
3d	"	"	E. Ryan,	Pittsfield,	1	00
Best single horse 4 years old and over,	John Cross,	Ypsilanti,	5	00
2d	"	"	W. H. Hawkins,	"	4	00
3d	"	"	J. Starkweather,	"	3	00
4th	"	"	J. K. Wallace,	Pittsfield,	2	00
5th	"	"	E. Morton,	Ypsilanti,	1	00
Best geldings 3 years old,	H. H. How,	Lodi,	4	00
2d	"	"	A. Rogers,	Ypsilanti,	3	00
3d	"	"	T. Fowler,	Superior,	2	00
Best geldings 2 years old,	David Merrill,	York,	3	00
2d	"	"	M. Clawson,	Ypsilanti,	2	00
3d	"	"	A. Rogers,	"	1	00
4th	"	"	E. Morton,	"		75

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Best geldings 1 year old,	H. Welch,	Pittsfield,		$3 00
2d "	"	D. M. Uhl,	Ypsilanti,	2 00
3d "	"	A. Cole,	York,	1 00
4th "	"	H. Welch,	Pittsfield,	75
5th "	"	A. Cole,	York,	50

FOREIGN HORSES.

Best matched horses,	W. Eldridge,	Plymouth,	5 00
" stallion,	S. J. Holladay,	West Cornwall,	5 00
" single horse,	Wm. C. Ayers,	Van Buren,	5 00

CLASS VII.—SPANISH MERINO, AND SAXON SHEEP.

The Committee on class seven, Spanish Merino, and Saxon Sheep, report as follows:

Best buck over 2 years,	J. Starkweather,	Ypsilanti,		$5 00
2d "	"	Thos. Wood,	Saline,	3 00
3d "	"	Aaron	Lawrence,	2 00
Best yearling buck,	Aaron Lawrence	Ypsilanti,		4 00
2d "	"	Thos. Wood,	Saline,	2 00
Best 5 ewes 2 years old,	G. W. Gale,	Ypsilanti,		5 00
2d "	"	Henry Compton,	"	4 00
3d "	"	D. M. Uhl,	"	2 00
Best yearling ewes,	J. Starkweather,	Ypsilanti,		5 00
2d "	"	D. M. Uhl,	"	4 00
Best pen of 5 lambs,	Thos. Wood,	Saline,		5 00
2d "	"	G. W. Gale,	Ypsilanti,	4 00
Best pen of ewe lambs,	G. W. Gale,	Ypsilanti,		5 00

CLASS VIII.—SAXONS.

Your Committee have found no competition in this class of sheep, and after examination find nothing worthy of premium.

CLASS IX.—FRENCH MERINO.

Your Committee on French Merinos, and cross bloods, would respectfully report, that they have performed the duty assigned them to the best of their judgment.

Best French Merinos	2	years old	and	over,	John Brewer, Yps.,	$5 00
2d "	"	"	"		G. W. Gale, "	3 00
3d "	"	"	"		John Brewer "	2 00
Best French Merinos	1	year old,	G. W. Gale,	Ypsilanti,		4 00

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Best 5 French 4 year old ewes, John Brewer, Ypsilanti, ... $5 00
2d five 2 year old French ewes, G. W. Gale, " 3 00
3d " " " " " 2 00
Best 5 French Merino buck lambs, G. W. Gale, " 5 00
2d " " " John Brewer, " 3 00
Best 5 French Merino ewe lambs, " " 5 00
2d " " " G. W. Gale, " 3 00

CLASS X.—CROSS BLOODS AND GRADES.

Best French Merino 2 year old buck, G. W. Gale, ... 5 00
2d " " " S. Rowley, Pittsfield, ... 3 00
3d " " " Aaron Lawrence, ... 2 00
Best French and Spanish Merino 1 year old buck, G. W. Gale, 5 00
2d " " " " " Horace Welch, 2 00
3d " " " " " Wm. Hiscock, 1 00
Best 5 French and Spanish Merino lambs, G. W. Gale, ... 5 00
2d " " " " " 3 00
3d " " " " H. G. Haight, ... 2 00
Best 5 ewe lambs 2 years old, G. W. Gale, ... 5 00
2d " " " H. G. Haight, ... 3 00
Best 5 lambs 1 year old, H. Compton, ... 5 00
2d " " H. Welch, ... 3 00
Best 5 ewe lambs, G. W. Gale, ... 5 00
Best Leicestershire buck, Lester Russel, recommend.
2d " " Thos. Edwards, recommend.
3d " " J. A. Chapin, recommend.
Best 5 crossed ewe lambs, J. A. Chapin, recommend.
Grade buck, 2 years old, Grove Spencer, recommend.

The above specimens of sheep are well worthy of a premium in the estimation of the Judges, though they may not be provided for in the list of premiums.

Your Committee also represent that the competition on two year old bucks, was strong, there being some twenty-five in number, all bearing evident marks of excellence.

CLASS XI.—HOGS.

Best boar 1 year old, Grove Spencer, ... $5 00
2d " Simon Kanouse, York, ... 3 00

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Best breeding sow over 1 year old, Chester Perry, Ypsilanti,.. $5 00
Best boar under 1 year, Mrs. Sarah Reynolds,..... 3 00

Discretionary premiums recommended to Chester Perry, for 4 pigs, for which no premium was awarded, because the number was not complete.

CLASS XII.—MANUFACTURES OTHER THAN DOMESTIC.

Discretionary premium of $1 to Miley & Hodgkin, for one marble top centre table, one cottage bedstead, one late improved screw bedstead, and one mahogany rocking chair.

1 set double harness, H. G. & I. Crane, Ypsilanti,..... $2 00
" single " " " 2 00
1 cooking stove, elevated oven, A. Worden & Bro., Ypsilanti, 1 00
1 hot air " A. Worden & Brother, Ypsilanti,..... 2 00
Coarse pegged boots, E. G. Boyce, Ypsilanti,..... 50
Best top buggy, S. Ostrander, " 2 00
2d " " " 1 00
Best set silver plated harness, Andrew Rogers, Augusta,..... 2 00
" " double harness, (name omitted,)..... 3 00
Coarse pegged boots, J. H. Phillips,..... 1 00
Kip boots, J. H. Phillips, discretionary premium.
Most numerous lot of agricultural implements, Moses Rogers, 2 00

CLASS XIII.—PLOWING MATCH.

S. Rowley, horses, Livingston County Plow,..... 5 00
John Rorison, " Waterloo Plow,..... 4 00
Mr. Tooker, " Index " 3 00
E. Basom, oxen, Livingston Index,..... 5 00
Chas. Abner, oxen, Long " 4 00

CLASS XIV.—FARM IMPLEMENTS.

Equatorial bee hive, Egbert Rice, Ypsilanti, premium recommended.
Cross bar bee hive, E. C. Peck, Ypsilanti, premium recommended of..... 1 00
Cross bar bee hive, L. Leavenworth, Ann Arbor, premium recommended of..... 50
Straw cutter, A. B. Shafer & Son, Ypsilanti,..... 2 00
Corn sheller, " " 2 00
Scotch harrow, P. Bennett, Augusta,..... 2 00

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Wheat drill, T. A. Haviland, Ann Arbor,	$2 00
Wheel cultivator, B. W. Hornbeck, Ypsilanti,	1 00
Corn sheller, Moses Rogers, Ann Arbor,	1 00
Cultivator, " " premium recommended,	2 00
Cutting box, J. M. Horner, Canton, premium recommended.	
Corn planter, U. Isbell, Lodi, premium recommended,	2 00
Corn planter and cultivator, O. G. Ward, Lodi, premium recommended,	1 00
2 grain cradles, M. Rogers, Ann Arbor, premium recomended,	1 00
1 grain cradle, Samuel Stanborough, Salem, premium recommended,	50
Corn cultivator, Moses Rogers, Ann Arbor, premium recommended,	2 00
Straw cutter, Moses Rogers, Ann Arbor, prem. recommended,	1 00
Horse rake, " " "	2 00
Eagle plow, A. H. Martin, Ypsilanti, "	1 00
Dozen corn brooms, E. A. Piatte, Ann Arbor, premium recommended,	1 00
Cheese, M. Noris, premium recommended,	1 00

CLASS XV.—DOMESTIC MANUFACTURES.

Best pair woolen hose, W. H. Hawkins,	1 00
2d " " Mrs. N. Norris,	50
Best gentlemen's socks, " "	1 00
Best pair woolen hose, Mrs. H. Welch,	50
Best patchwork bed quilt, Mrs. A. Dury, Pittsfield,	3 00
2d " " Mrs. L. E. Hewitt, Ypsilanti,	2 00
3d " " Mrs. F. C. Crittenden, "	1 00
Best patchwork quilts, Mrs. Moses Rogers, Ann Arbor,	3 00
2d patchwork quilts, Mrs. Moses Rogers, Ann Arbor,	1 00
Best patchwork spread, Mrs. A. K. Clark, Salem,	3 00
Best piece rag carpet, Mrs. C. Yost, Ypsilanti,	3 00
2d " " Mrs. S. Ostrander, Ypsilanti,	2 00
3d " " Mrs. Moses Crane, "	1 00
Best lb. woolen yarn, Mrs. W. Chamberlin, "	2 00
2d " " Mrs. McKim, Superior,	1 00
Best pair linen stockings, Mrs. McKim, Superior,	1 00
Best pair cotton stockings, Mrs. J. Starkweather, Ypsilanti.	

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Best pair cotton blankets, Mrs. E. Young, Ypsilanti, ... $3 00
3d ten yards flannel, " " " 1 00
Best pair cow-hide boots, Mr. J. Phillips, ... 1 00
Best pair kip boots, " "

The Committee recommend discretionary premiums upon patchwork quilts, Nos. 52, 40, 19; and upon rag carpets, Numbers 18, 9, 10, 11.

The Committee found the department well filled with quilts and rag carpets, which were well worthy of attention, and manifested a decided improvement in industry and economy, and certainly speaks well for the ladies of Washtenaw.

CLASS XVI.—CHEESE, BUTTER, BREAD AND HONEY.

Best 3 loaves, wheat, E. J. Tooker, Pittsfield, ... $1 00
2d 2 boxes honey, Mrs. Young, Ypsilanti.
Best bee-hive and honey, E. C. Peck, no competition.
2d bee-hive and honey, J. Allen, Ypsilanti, ... 3 00
2d pail butter, " " 2 00
Best box honey, " " 2 00
Best crock butter, J. K. Wallace, Pittsfield, ... 2 00
3d 10 lbs. butter, J. B. Vannatta, Salem, ... 1 00
Best 10 lbs. roll butter, J. Hutchinson, Ypsilanti, ... 3 00

CLASS XVII.—FIELD CROPS.

Best bushel Poland wheat, S. Rowley, Pittsfield, ... 1 00
3d " " " E. Eddy, " 50
Best bbl. flour, A. Rose, Ypsilanti, ... 2 00
Best 12 ears corn, G. McCormick, Superior, ... 1 00
2d " broom corn, E. Eddy, Lodi, ... 50
Best buckwheat, (no competition,) J. G. Tooker, Ypsilanti, ... 2 00
Best bushel barley, W. F. Wing, Superior, ... 1 00
3d " S. Rowley, Pittsfield, ... 50
Best bushel potatoes, O. White, Ann Arbor, ... 1 00
" " " P. Brown, Van Buren, ... 50
" " " Wm. Cross, Ypsilanti, ... 1 00
" " turnips, J. G. Tooker, " 1 00
2d " round turnips, C. J. Wheeler, York, ... 50
Best 12 stalks broom corn, E. A. Platt, Pittsfield, ... 1 00

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Best 4 pumpkins, J. G. Tooker, Ypsilanti, ... $1 00
One barrel flour, A. Ross, " 1 00
One bushel early potatoes, P. Parsons, Pittsfield, ... 1 00

CLASS XVIII.—VEGETABLES.

Six stalks celery, H. L. Howard, Augusta, ... 50
Carrots, " " " 50
Best 12 sweet potatoes, S. R. Doty, Ann Arbor, ... 1 00
Best 4 squashes, " " " 1 00
Best 6 turnip beets, P. Bennett, Augusta, ... 1 00
Best 6 parsnips, " " " 1 00
Half bushel tomatoes, " " " 50
Two quarts Lima beans, P. Bennett, Augusta, ... 50
Best 6 carrots, W. S. Maynard, Ann Arbor, ... 1 00
Best 6 heads celery, W. S. Maynard, Ann Arbor, ... 1 00
Four squashes, J. Rorison, Ypsilanti, ... 50
Best half bushel onions, C. H. Griffin, Augusta, ... 1 00
2d " " " G. McCormick, Superior, ... 50
Three pumpkins, J. H. Hicks, Lodi, ... 1 00
Four pumpkins, M. Reynolds, Salem, ... 50
One box tomatoes, Mrs. B. Follett, Ypsilanti, ... 1 00
Six blood beets, H. Compton, " 50
Best 12 sweet potatoes, M. Crane, York, ... 1 00

CLASS XIX.—FRUIT.

Your committee to whom was submitted the examination of fruit, beg leave to submit the following list of premiums:

Best and greatest variety of good table apples, E. D. Lay, Ypsilanti, ... $2 00
2d best and greatest variety of good table apples, Prince Bennett, Augusta, ... 1 00
Best 10 varieties of good table apples, John Lake, Ypsilanti, .. 1 00
2d " Z. K. Lay, Ypsilanti, .. 75
Best 6 varieties of good table apples, John Lake, Ypsilanti, ... 75
Best single variety 4 specimens, Prince Bennett, Augusta, ... 50
Best and greatest variety of pears, E. D. Lay, Ypsilanti, ... 1 00
2d " Z. K. Lay, " 50
Best single variety pears, E. D. Lay, Ypsilanti, ... 50

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Best and greatest variety of peaches, Prince Bennett, Augusta, $1 00
2d " F. B. Conklin, Ypsilanti, 50
Best and greatest variety of quinces, I. M. Town, Ypsilanti, 1 00
2d " Mrs. Mark Norris, 50
Best lot of grapes, Mrs. Mark Norris, 1 00
2d " Prince Bennett, Augusta, 50

Your committe would further say, that in awarding premiums they found it very difficult to determine between different lots, particularly among grapes and quinces, there being many examples worthy of a first premium; they recommend the following list to the favorable consideration of the Executive Committee, as well worthy of discretionary premiums:

Grapes—William Cross, Ypsilanti; Mrs. Mark Norris, Ypsilanti; H. Compton, Ypsilanti; Mrs. B. Follett, Ypsilanti; C. G. Wheeler, York; F. W. Clark, Ypsilanti; E. D. Lay, Ypsilanti.

Quinces—William Cross, Ypsilanti; Chester Yost, Ypsilanti; John Cook, York; C. G. Wheeler, York; G. Spencer, Ypsilanti; E. D. Lay, Ypsilanti; B. F. Shelmire, Pittsfield; M. Reynolds, Saline.

CLASS XX.—FLOWERS.

Dried grass bouquet, Miss A. Van Fossen, Ypsilanti, discretionary premium.
Dried grass bouquet, Miss B. Emerick, $1 00
Wreath and flowers, Miss O. H. Lee, 1 00
Dried grass bouquet, Miss B. Emerick, 50
Best floral design, Miss P. Cross, 1 00
" bouquet of wild flowers, Miss E. L. Newton, 1 00
" pressed wild flowers, Miss Clawson, 1 00
1 herbarium, Mrs. Sarah Hammond, 1 00
Fancy fishing scow, Mrs. J. B. Cook, discretionary premium.
Bouquet of flowers, Mrs. A. Hawkins, discretionary premium.
Moss basket winter flowers, Mrs. M. Norris, "
Moss mounted flowers, Mrs. J. W. Vancleve, "
Bouquet cut wax flowers, Mrs. T. S. Hill, "
" " " O. H. Lee, "
Bouquet forest leaves, " T. S. Hill, "
Moss basket, Miss C. McKim, "
" pyramid, Mrs. B. Follett, "

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Best flat bouquet, Mrs. Sarah Hammond,	$1 00
2d " Mrs. M. Norris,	50
Best round bouquet, Mrs. W. S. Maynard, Ann Arbor,	1 00
2d " Mrs. Mark Norris,	50
Bouquet flowers, " discretionary premium.	
Cut flowers, Mrs. W. S. Maynard,	1 00
Best basket, Mrs. B. Follett,	1 00
2d " "	50
4 bouquets, Miss M. J. Fairman, Canton, discretionary premium.	
Foreign flowers, " " "	

CLASS XXI.—NEEDLE WORK.

Silk embroidered smoke cap, Mrs. L. F. Platt,	2 00
Embroidered cushion, " "	1 00
Embroidered vest, " "	50
Worsted embroidered ottoman cover, W. M. Martin,	2 00
Bible mat, O. H. Lee,	1 00
Sofa pillow, "	50
Chair cover, raised work, E. Sampson,	2 00
Two lamp mats, Sophia Deady, Ann Arbor,	1 00
One lamp mat, Mrs. A. Hawkins,	50
Two needle work collars, equally worthy, and a division of the premium recommended, with the honor of the 1st premium, Miss M. A. Howland and Miss E. W. Norton,	2 00
2d best embroidered handkerchief and pair of under-sleeves, Miss A. O. Patterson,	1 00
3d embroidered handkerchief, Miss S. A. Palmer,	50
Worsted box, Miss E. Wheeler, Salem,	50
Morocco work box, Miss E. Sampson,	1 00
Crotchet purse, Mrs. C. Cheeny,	1 00
Best pink lamp mat, Mrs. J. Starkweather,	2 00
2d " " " L. F. Platt,	50
Lamp mat, Mrs. C. Borton,	Discretionary.

The following discretionary premiums are recommended:

Mrs. F. W. Noble, specimen of ornamental needle work.

Mrs. B. Follett, " " " "

Mrs. L. F. Platt, work divan and cushion, 1st premium.

Mrs. C. H. Tisdale, " " " "

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D. Simmons, York, fancy purse, shell work.

Mrs. T. S. Hill, tape work collar, 1st premium.

Mrs. Starkweather, three fine specimens of needle work.

Mrs. B. Follett, child's dress and sack.

Miss P. Sampson, specimen of work.

Mrs. Cheeny, one pair velvet slippers, embroidered.

Chair covering and ottoman, by a child.

Mrs. Cheeny, gent's comforter.

Mrs. Davis, Ann Arbor, child's cap.

Mrs. T. Chambers, black lace veil.

Mrs. O. H. Lee, four specimens embroidery.

Mrs. C. H. Tisdale, specimen of needle work.

Mrs. Wm. M. Martin, one pair embroidered suspenders.

The Committee are pleased to see so fine a display in this department, but regret that other parts of the County are not more fully represented. The ladies of Ypsilanti are particularly commended for their exertions in this exhibition, only four articles in this department coming from other towns. The Committee hope that at the next Annual Fair of the Society, other towns and societies of the County will be equally well represented, and the exhibition surpass this, quite as much as this has all former ones.

CLASS XXII.—POULTRY.

S. Basom, York, pen peacocks, no premium offered.

1 coop pea fowls, P. Bennett, Augusta,	$1 00
1 pair Chittagongs, F. S. Finley, Ann Arbor,	2 00
1 coop Shanghais, M. Rogers, "	50
" O. White,	2 00
5 turkeys, S. G. Rowley, Pittsfield,	1 00
1 coop Shanghai fowls, J. W. Childs, Augusta,	1 00
Chittagongs, N. A. Prudden, Ann Arbor,	1 00

CLASS XXIII.—PAINTING AND DRAWING.

Daguerreotype, Shipmans, Ypsilanti,	2 00
Monocromatic painting, J. P. Dickinson,	1 00
Best pencil drawing, A. H. Pattison,	2 00
2d " "	1 00
Best oil painting, Miss M. Hewitt,	2 00
2d " "	1 00

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Monocromatic painting, Miss R. Norris,..... $2 00

Pencil sketch, N. Webb, Pittsfield, discretionary premium.

MISCELLANEOUS—DISCRETIONARY PREMIUMS.

Hoxie & M'Elroy, one grass seed sower.

W. Brown, Ypsilanti, two hydraulic rams.

Smith & Batchelder, Ypsilanti, 1 set grave stones.

A. B. Shaffer & Co., drilling machine.

Blacksmith, set mulley heads.

J. P. Dickinson, 1 washing machine.

Mrs. A. Hawkins, tidy and grass hat.

L. J. Ticknor, grass hat.

Miss S. Derby, ladies' work bag.

M. B. Morton, tidy, hearth rug.

Mary R. Cross, hearth rug.

A. Worden & Brother, parlor stove.

G. M. Osborne, 4 parlor stoves.

Worden & Brother, shower bath.

C. M'Kim, rug.

Kate Emerick, shell box.

S. G. Rowley, buckskin moccasins.

E. J. Boyce, heavy kip boots.

" light "

H. K. Dickinson, frock coat and silk vest.

W. Basom, woolen coverlet, raised work.

Miss Swick, crape hat.

W. E. Cheever, box stuffed birds.

Mrs. P. Samson, white counterpane, worked stand cloth, and linen table spread.

Mrs. I. N. Conklin, black lace veil, worked.

J. D. Olcott, 500 whitewood shingles.

P. Reynolds, silk hat.

J. Newton, coverlet, cotton and wool.

S. Stanley, needle book.

Esther Bennett, piece musquito bar and dimity shirt.

J. Van Fossen, four axe handles.

S. Ostrander, cutter.

S. Brown, bottle currant wine.

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H. Osborn, 1 piece black cassimere.
" " brown "
" " grey "
" " grey fulled cloth.
" " tweeds.
" " red flannel.
" " white flannel.
" " cotton and wool flannel.

Miss Clawson, paper bonnet.

L. C. Randall, half bushel peas.

T. M. Town, bottle currant wine.

M. Rogers, tidy, and hair bracelet.

J. D. Kerts, lightning rod—as deserving as any rod we know of.

H. Schlack, barrel of glue.

F. W. Noble, chair cushion.

FOREIGN LIST.

Saxon buck, J. Johnson, Williston, Vt.,	$6 00
French Merino buck, B. F. Bingham, Cornwall,	5 00
" ewes " "	5 00
Best yoke of oxen 4 years old, Myron Gates, Plymouth,	5 00
" " 3 " " "	5 00
Durham bull, J. B. Wells, Franklin,	5 00
Saxon buck, " "	5 00

ADDRESS

DELIVERED BEFORE THE WASHTENAW COUNTY AGRICULTURAL AND HORTICULTURAL SOCIETY.

BY PROF. HAVEN, OF ANN ARBOR.

You have been listening to the inarticulate, perhaps inharmonious music arising from the blended voices of choice cattle, noble horses, rude hogs and clamorous sheep, animals ever attendant upon man and which seem almost indispensable to our comfort; and even the silent specimens of Nature's munificence and beauty, and of man's contrivance and skill, have addressed you with an eloquence not to be equalled by human speech. How then can I hope, during the few moments you may give

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your attention to me, to perpetuate the pleasure you have already received? Who can look upon these beautiful specimens of grain and roots, and rich and juicy fruits, and other vegetables, mostly the products of our own county, and not receive from them lessons that no human voice can utter? Who can examine these improved plows, and harrows, planting, tilling, harvesting, and threshing machines, and other agricultural implements, each the embodiment of the experience and thought of many years, and not feel a pleasure which words must strive in vain to heighten? What need then, of a speech? It is because you would have an expression in language, necessarily inadequate, of the spirit and purpose and benefit of this great annual gathering? Pardon me, if I enter upon this duty with diffidence. Pardon me, if I insist that the natural emotion of a thoughtful man, awakened by such a scene is absolutely unutterable, especially when we reflect that less than fifty years ago, just where we see now collected stupendous exponents of man's power, beautiful exhibitions of his skill, and thousands of the citizens of a properous and Christian people, no other display of human ingenuity could have been found than the tomahawk and bow and arrow, smoothened by usage, no other voice heard than that of the wild beasts, or wilder savages.

With such a scene before me, I will not spend many moments in attempting to show the usefulness of the farmer. Upon this, much has been said unnecessarily, for no man is thoughtless enough to deny it. Much,too, has been said upon this subject, extravagantly and falsely, for the farmer is not the only useful man in society. The greater part of the produce of the soil must be cooked before it is eaten, but the culinary process is not farming. Grain must be ground before it is consumed, but the miller is not a farmer. Wool and cotton and flax must be cleansed and carded, and spun and woven, and shaped and joined, before their use, but manufacturing and tailoring are not farming. Man cannot live by bread alone, for the tools with which he labors, for his carriages and clothing, his newspapers and books, and his luxuries, more of which he can now command than kings of ancient times, the farmer is as dependent upon other men as other men are upon him. It would be a plunge into barbarism, and would reduce the population of the nation to the barbarian standard, both in numbers and condition, to deprive

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either the farmer or any other class, of what they receive from other men.

But agriculture is useful, because it ties the foundation of the greater part of the productive labor of the world. Nearly all of the raw material upon which the energies and skill of men are expended, is the product of the soil. Agriculture employs the mechanic, moves the myriad wheels of the factory, and propels the laden vessel across the wide seas. For the sustenance and comfort and luxuries of man the waters yield their fish and minerals; the earth without tillage, its metals and rocks, and coal, and its forests a few vegetables of spontaneous growth; but cultivation supplies the great mass of material, and therefore agriculture must forever be an indispensable employment.

But I pronounce agriculture a particularly noble and manly occupation, because it conduces more than any other occupation possibsy can, to a full and harmonious development of manhood, physical, mental and moral. This is my profound conviction, and if it be true, what a striking exhibition is it of the goodness of God, since this must necessarily ever be the employment of a majority of men.

There are many occupations to which a highly artificial society has given birth, that cannot be practiced without injury to health, and an actual sacrifice of life.

Criminals, doomed to die, are in one country compelled to collect quick-silver from the mines, sure as the hangman's rope, soon to destroy them; and carefully gathered statistics prove that many departments of industry, considered useful and necessary, hasten death. A large proportion of sailors perish by shipwreck, and it is at the expense of the blood of our fellow-men, that we enjoy many of the luxuries of life.

But the farmer's life is a life of health. He may indeed injure himself by undue exposure and excessive toil, but there is nothing in the occupation necessarily antagonistic to bodily development and strength. It was a fable of the ancient Greeks, that the giants recovered their strength as often as they fell to the ground, which was only a poetical way of stating the fact, that the soil infuses life, not only into the plant, but also into him that tills it. On an average, a rural population is the healthiest and physically the strongest. This, statistics clearly show.

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Agriculture is also conducive to a good mental development. Upon this point there is probably a difference of opinion. The inhabitants of cities are prone to fancy themselves better educated, and possessed of more information, than the people of the country. This assumption of theirs is quite current in city newspapers of the lower order, and forms the body of many a stale cockney joke and pointless story. Indeed, as the papers attribute every exhibition of shrewd knavery to a Yankee, and of simple, unconscious wit to an Irishman, so all ignorance and greenness belong to a countryman. It may be, that on an average, the inhabitants of cities excel in the heartless and silly ruffle-work accomplishments of the day; it may be that the crowding of so many occupations together, brings them oftener into contact with men of profound study, and thereby they acquire a smattering of more knowledge from others, and it may be, thought, fluency, and self-possession are exhibited by them in a higher degree; while the countryman, if studious and thoughtful, confined to a narrower range, is more thorough and exact and modest, and in strength of judgment and soundness of opinion, need have no fear of a comparison.

But without endeavoring to settle this question by facts, and not forgetting that the facilities of acquiring information in the city have heretofore been much greater than in the country, but now are about the same in both, let us examine particularly the relative influence of farming and other industrial pursuits on the human mind.

There is no other occupation so suited to a healthful development of the soul as the cultivation of the soil. Almost all other bodily industry, if it presupposes any degree of mental culture, produces a partial and distorted development. The range of thought necessary to constitute a good mechanic, is not so wide as that necessary to constitute a skillful farmer. In the various departments of manufactures, division of labor is pressed to its utmost limits, and many human beings are constantly employed in one trivial occupation, such as the sharpening of a pin, the polishing of a button, the weaving of a carpet, the superintendence of a machine.

He may become expert in this process; he may profoundly understand all the mental action involved in it, but after a familiarity with the beaten track is acquired, it cannot suggest a new thought, nor furnish the slightest aliment to the mind. This may be an extreme case,

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but the same principle applies to all occupations in which the variety of action is small, and the industry a routine. Even in the professions, as they are technically styled, though the mind cannot remain inactive, yet there is a tendency towards a partial and distorted growth of mental power.

The physician is apt to look at every thing with a medical eye; he considers everything with reference only to a diseased body; the whole earth is to him an immense pill-box, or collection of boluses and jalaps and infusions, while all the phenomena of pure mind and the innumerable departments of facts and thought, having no connection whatever with his peculiar art, may be by him denied, or at least unknown. So the mere lawyer is mentally bound, as he would have all other men both body and soul, by statutes and precedents and interpretations and decisions, while the mere technical theologian, perhaps more pitiable than either, never looks upon Nature nor man, the earth nor the heavens, in their own true light, through the artificial and dogmatic notions of the past ages. And a still more lamentable feature of this one-sidedness is, that these men are apt to be excessively bigoted, and to fancy that all others but themselves are ignorant. Such are not all professional men, such need not be any; but such are some, and none are more conscious than professional men themselves, that such is the inevitable tendency of their own studies, unless they occasionally and regularly break loose from the trammels of their narrow occupation and range over other fields of thought.

Now I maintain that the farmer's life is less exposed to this evil than perhaps any other. The range of thought requisite to make a true and superior farmer, is wider and embraces more, and more dissimilar elements than of any other occupation. Many branches of natural science have a direct connection with agriculture. Chemistry and Botany yield to it their most valuable secrets, and all that abundant information and study upon the markets, the distribution of population, and the demands for the various useful articles of life, so indispensable to a good manufacturer and merchant, are just as useful to the farmer.

But besides this stimulus to mental action, the farmer enjoys many, peculiar to his employment. I refer to the nature of soils, complex though they are, a discovery and study of the various processes by which unproductive tracts of country may be redeemed, a study of the peculiar

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capacity of soils, by which it is found that land utterly useless for some articles is the most valuable for others, an observation of the process of growth, a study of the laws of life, an acquaintance with the peculiar nature of domestic animals, their varieties of breeds, the strange effects of crossings and intermixtures—all these are full of profit and interest and delight to an active mind. The man who would be stupid and thoughtless as a farmer, would not be roused to mental activity by any occupation; and to a man of thought there is no other department of industry so full of interest and pleasure.

While there is no branch of industry that naturally awakens more mental activity than the farmer's, there is none in which thought and study produce a more beneficial effect.

We sometimes hear of a prejudice against scientific farming. This, if language is properly used, is only a prejudice against knowledge and in favor of the opposite, which is stupidity and ignorance, for *science means knowledge*. Who is opposed to a scientific arrangement and practice of law? a scientific practice of medicine? a scientific construction of houses, steam engines, machinery, ships, and any and every other implement of industry? Who is opposed to scientific navigation and locomotion?

Who would have society thrust backward to the dark ages, when disputes between neighbors were decided by lot, or by fiery ordeal, or by torture, or by some despot, instead of by a trial by jury, under the advice of counsel and superintendence of a judge, according to written law? But this is scientific. Who would have our sick men nursed by ignorant empyrics, who had never seen a human skeleton, knew nothing of the circulation of the blood, or the action of the various parts of the human form divine, and whose knowledge was confined to a few fancies and fewer facts, and who resorted to the most offensive drugs, and incantations and charms, and the mummeries of witchcraft for a cure, instead of the judicious practice found upon close and self-denying study and law? But this is science.

Who would have our people travel, and our produce dragged over muddy corduroy roads, ten miles a day, and working a passage at that, through an equal mixture of land and water, instead of on the plank road, over the macadamized highway, or by the railroad? But this is scientific.

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Who would have our commerce carried on by means of bulky, awkward vessels, miscalled ships, rolling this way and that, and with difficulty kept from sinking, instead of by those noble cutters and yachts and steamships, in each of which American science has taken the palm from all the world. But this is due to science.

And now I ask, shall science, in other words knowledge and study, systemized, enable our free countrymen to equal and surpass all other nations in these departments of industry, and shall she not shed any light upon our practice of tilling the earth? Shall we continue to plow and sow and reap and raise stock, just precisely as men did when they rode on carts without springs, sailed in ships built in defiance of the laws of navigation, wore home-spun clothing, and when the power of steam and the usefulness of the telegraph were unknown? Such men there may be, but they are not only behind the age, but deficient in sound sense; they are at least semi-idiots. And let not any that have cultivated minds, that can speak or write so as to claim the attention of their fellow men, so prostitute the intellect which God has given them as to advocate a sentiment so false and absurd and disgraceful, both to him that utters it and him who patiently listens. The most contemptible specimen of American character is a demagogue, a man who will flatter, fawn and lie, to get the good will of the people; and the most contemptible specimen of this most contemptible class, below which there is no lower depth of apes in human shape, are those who will get about them an ignorant audience, and flatter them for their ignorance, and declaim against science and scientific men.

An old writer has well said, "It is indeed no small satisfaction to think, that whoever attacks learning, if he does it weakly, does it no harm; and if he does it well, his own performance is a good argument against him, while he shows thereby its usefulness as well as his own ingratitude."

Agriculture has improved by science, and must and will improve much more. Land is capable of supporting many more inhabitants, and of yielding much more, both of sustenance and profit. The only question is, shall this improvement be brought about by a very few, and many of these not practical farmers, and thus shall the progress be slow and uncertain; or shall this great body of agriculturists be studious and enterprising, and thus from their combined energy and experi-

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ments shall the progress be regular and rapid? It is the object of agricultural fairs, true agricultural papers and schools, to accomplish the last mentioned result. And when we consider the character of the American people, not trammeled by old institutions and habits, but proverbially given to change, and the facilities for imparting information, the imposibility of any new discovery or invention remaining long a secret, the rapid increase of population, and consequently of markets, the immigration of men from other countries, bringing with them the results of experiment in other lands, and the truly creditable efforts now made for the advancement of this mother of arts and of men, the prospect is most gratifying to every lover of his country and of his race.

There are two rival methods of farming; farming by rote and farming by science. The former is traditional and hereditary. Like the crowns of despots and the customs of eastern peasantry, it descends from father to son. The leading impulse of it is habit. Like the off ox in plowing, taught to walk in the furrow, and the nigh ox, taught to walk on the hard edge, the farmer by rote plods on in the old track, never looking up nor around, and exhibits no more thought than his plow, or than an empty barrel rolling down hill. Farming by science implies study and reflection, an adoption of the old plan when the old plan appears the best, and when not, the adoption of a new.

The same classification will apply to every branch of industry. Napoleon excited the astonishment and indignation of the veteran generals whom he conquered, by violating, as they said, all the classic rules of military operations. Poor simpletons, they did not understand till too late, that Napoleon was fighting according to science; that he was profoundly versed in all the laws which they followed, and that therein lay his strength; that he looked beyond those regulations, to their *principles*, and thus was able for himself to form new laws, and that not one of them were so thoroughly instructed in the art of war as himself, and that therefore he was their superior. Charles Lyell, the famous geologist, who has traveled through this country and observed closely its institutions as well as its soil, has lately expressed his opinion, that the Americans owe more of their wealth and prosperity to the free adoption of new methods of obtaining desired results, especially in the department of manufactures than to the cheapness of their land, the fertility of their soil. The cotton-gin, the steam-boat, the reaper, and hun-

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dreds of other similar machines were probably in his mind. Travelers inform us that in many countries of Asia, precisely in those now impovished and feeble, the same costume and customs, and methods of industry, described in the Bible as prevalent three thousand years ago, now prevail; but it is the unvarying characteristic of a prosperous people that the habits of industry are not traditional and fossilized, but alive and variable, charged with the energy of intellect and controlled by the activity of the human soul.

But if this is so evident as not to admit of a denial, why do any indulge a prejudice against scientific farming? It is, first, because many "book farmers," as they are properly styled, have entered upon their labors without that indispensable science only to be acquired by a practical acquaintance with the art, and have thus by their ignorance, coupled with great pretensions, brought a reproach upon true science. This spurious science has been superficial, and wholly unregulated by experience. Unfortunately, it is a common opinion that almost any one, without an apprenticeship, can cultivate the soil. And many a lily-fingered man, smitten with the sudden desire to imitate the Father of his country, in the latter part of his life, having acquired a property in some other avocation, has purchased a farm, and with book and newspaper in hand, enters upon his acres, and straightway proceeds to astonish the natives by a method of agriculture exclusively scientific, without condescending to derive any information from his neighbors who have been practical farmers from their boyhood. It is not strange that he makes many mistakes. His novel method of fertilizing the soil seems to be of no value and costs more than the soil is worth. His barns are built on a new plan, his outhouses are full of strange implements, and stocked with spurious guano; he has a new way of planting and hoeing and reaping; there is not a suggestion made in a newspaper which he does not proceed to carry out early the next morning. But alas, he is doomed to disappointment. His strange exotics die. His wonderful plans fail. Blasting, mildew, and destructive insects had not entered into his plans, but do enter his fields. He was intending to make his farm an El Dorado, a perfect mine of wealth and garden of beauty; but alas, it is a slough into which he has cast more cash than it is worth besides the original price, and now is worth less than when he bought it; and finally, disgusted with the whole business, he sells his

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land, in a fit of despondency, for half price, and returns to the village or city and endeavors to replenish his empty purse by selling tape, or some other honorable occupation—a sadder, perhaps not a wiser man. And the neighbors shrug their shoulders and exclaim, "so much for scientific farming!"

But now I ask seriously, is this scientific farming? Would it be even scientific shoe-making? Suppose a man should read all that can be found in cyclopedias, upon the process of making shoes, and should then, without practice, without familiarizing himself with the knife, the thread and the awl, with newspaper spread out before him, betake himself to the manufacture of boots and shoes. Would it be strange if his coverings for the feet were more imperfect than a savage's moccasins or a Laplander's snow shoe. And if science alone will not teach us how to make a shoe, how can it qualify us for the complicated and varying duties involved in cultivating a farm? Farmers themselves must be scientific, and theory must be instructed by practice. Good suggestions must be examined and tested by practical men.

Another fact which has unjustly brought scientific farming into disrepute with many, is the inevitable failures and disappointments which all experimentalists must occasionally meet.

Suppose a farmer, according to the true principles of exact science, should obtain an accurate analysis of the soil of a certain field, and should find it deficient in a certain substance necessary to make it a good wheat growing soil, and so far as the chemists could perceive, in one substance only, and that he procure that substance and mingle it with the soil and then sow wheat, but instead of obtaining such a crop as he expected, the growth proves a perfect failure and he can see no benefit whatever from the means he has employed, shall he therefore peremptorily decide against all scientific farming, and pronounce all analysis of soils a humbug? How many efforts was Fulton compelled to make before he succeeded in constructing a steamboat, that should walk over the waters like a living thing! And how many were ready to jeer at him and pronounce him a maniac at every successive failure before his final triumphal success? How many efforts was Morse compelled to make, and how many long and patient experiments were tried in the laboratory, before he succeeded in constructing a simple apparatus, by which men between whom the diameter of the world intervenes can converse with each other as next door neighbors?

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All true scientific men expect many failures and disappointments before one success; and no man of experience will declaim against science on this account. The improvement of agriculture must be peculiarly experimental. So many influences bear upon the process of growth, so complicated and mysterious and intangible are many of these influences, that it is only by a patient study, and very long and laborious researches, and after many utter failures, that the resultant of the best system of agriculture can be reached. I do not believe that it can be reached in a thousand years. Indeed it is probably capable of indefinite and eternal improvement.

For this reason I am strongly in favor of agricultural schools, and experimental or model farms. There are two old apothegms which embody a great deal of practical wisdom, bearing upon this subject: "What is every man's business is no man's business," and, "in union there is strength." It is impossible for farmers simply to acccomplish all that is demanded. Even the wealthiest farmers cannot afford the expense. It should be with farming as it is in the science of medicine. It is not expected of single practitioners, whose time and energies are absorbed with their patients, to accomplish much in the advancement of their art. But the medical schools are expected thoroughly to examine the subject in all its branches, to try experiments, to arrive at new facts, and the single practitioners, while they may occasionally contribute some new facts and observations to the colleges, are expected constantly to avail themselves of all the new applications of science published by these central schools.

So ought it to be in agriculture. There should be joint stock companies of farmers for the improvement of domestic animals, as there already are in some parts of the country. There should be agricultural schools and colleges, where the principles of agriculture, that are known, should be studied, and where constant experiments in all that appertains to the art should be made, and where it should be anticipated that nine out of ten of the experiments should prove partial or total failures, but where we might expect results would be occasionally reached that would add millions of dollars to the capital of the nation. And lectures should here be given to all who will attend.

Who denies that many of the branches of agriculture in our country have been vastly improved within the last twenty-five years? To con-

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fine our attention to the single item of sheep and cattle, who is not aware that by the introduction of new breeds of sheep, and the judicious crossing of them with the old stock in the country, both the quantity and quality of wool raised from the same amount of pasture, and also by similar experiments upon cattle, the character of dairies and of working oxen have been vastly improved? But how has this been brought about? Principally by single enterprising farmers; men of wealth and men of study. But how many of them have often been disappointed, and endured heavy pecuniary loss? And how much more could be accomplished by a combined action? This great enterprise ought not to be left to single men. Farmers should combine their efforts to the universal good.

I am therefore, decidedly in favor of agricultural schools, and the addition of agricultural departments to our Universities. I believe it would be well to have a model farm connected with the University of Michigan, and the judicious expenditure of some of the funds under the care of the State, for the promotion of this great art. And this should be done on a liberal scale, with a determination to persevere, though disappointments might be frequent, and the reward not immediate.

Let the funds be judiciously expended; let established principles be brought out in lectures, and let new experiments be constantly tried, and as true as God's laws are permanent, the State must be a gainer. One thing is certain, agriculture must improve, or untold miseries await the world. The population of the world is rapidly increasing, all of whom are fed from the products of the soil, and these products must increase, not only by bringing waste land into cultivation, but by augmenting the productiveness of the soil. It is an old theory, that sooner or later, every country must become so stocked with human beings, that it can supply no more, and then, if starvation is not the consequence, poverty must press in a thousand ways upon the people; or wars, famine and pestilence must remove the superfluous population, for the convenience of the survivors.

This, is a horrid theory, reflecting heavily upon the goodness of the Almighty. It is a false theory, and yet it is abundantly plausible. It is true that there are countries that do not now contain a population one-half so large as formerly, and yet the present inhabitants consume all

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that the soil, with its modern cultivation, will bear. This is true of Judea and Egypt, and sections of country in the north of Africa, and in the vicinity of Rome.

But the fact is, agriculture is capable of indefinite improvement. The productiveness of the soil may, at least for many generations, advance more rapidly than population can possibly increase. In ancient Italy it was said that seven acres was the average size of a farm. In Flanders, at present, where the soil was originally sterile, one acre and a quarter supports a human being. As in ancient Egypt, so, if we may credit accounts in the most modern China, the land has reached a still higher productiveness.

According to the statements of our last census, the quantity of improved or cultivated land in the United States, is about 7½ acres to each inhabitant, but at the same time, our country exports to other lands an immense amount of agricultural produce. Still the amount of exports over and above the imports of agricultural productions from other lands has not been more than one-fiftieth of the products of our soil. In other words, forty-nine-fiftieths of the products are consumed on our own soil.

Now it is evident that the agriculture of our country could easily be so improved that two acres would support a human being. At that rate the land in these United States, now under cultivation, without subduing a single acre more of wild land, would support a population of 236,915,244 human beings, a population equal to that of all Europe, and one-fourth as large as that of the whole world. But still further, the United States and Territories comprise about 2,000,000 of square miles of land. Allowing one-half of this for permanently uncultivated territory, comprising the beds of streams and lakes, the tops of mountains, deserts, the sites of buildings, roads and parks, forests and marshes, still there would be 640 millions of acres, capable, we verily believe, by processes already known, of amply supporting 640 millions of human beings, a population not much less than all of the living human family.

How many generations must pass away then, before the world is deluged with human beings! Not one particle of matter capable of entering into the constitution of vegetable and animal, should be wasted or placed where its value cannot be received. Bodily life is but one of

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the products of a constant transference of matter from one condition to another. The matter that was a short time ago the leaves of the primitive forest, combined with some of the pulverized rock of the soil, and with some of the gases of the air and water, becomes corn; it is soon changed into the flesh of an animal, it nourishes a man, it passes again into the air or the earth—not a particle is lost—and now it is ready to be changed again into grass or grain, or any other article of food for man or beast.

Thus you see that on an extended scale, cultivation can never impoverish a country. Nay, cultivation enriches a country; for by the process of growth, new mineral matter is disintegrated from the rock, and the soil is slowly but surely deepened, and it is not improbable that the amount of carbon in the shape of carbonic acid is continually increasing.

But the greatest shame of the nation, as an agricultural people, is that vegetable food once carried to the market, is considered as lost and destroyed, and never is sought again after it has accomplished its temporary purpose of nourishing man and beast, to fertilize the soil and pass again into growth and beauty and wealth. We read of farmers in Michigan selling from one hundred to thousands of bushels of wheat, and many tons of hay and other products, and we read of locomotives drawing long trains of cars carrying thousands of tons of solid nutriment towards the great cities for home consumption and the foreign market; but we never read of those cars bringing back anything in return for the land. The farmers receive their money—but gold and silver and bank notes, though often called dirt, are not often used for manure. Does it need anything more than a very little common sense, and a knowledge of the second process of school arithmetic, to know that sooner or later such a system *must* impoverish a country? If you have a million dollars to live upon, and continually subtract from it and add nothing to it, sooner or later it must be consumed. The productiveness in our soil is a finite quality—it can be exhausted, and that too, very soon. The rich soil of this country can soon be deprived of one or more of its essential elements. There are thousands of acres even within the limits of the United States, that have been over-worked till they are temporarily destroyed. What is necessary on a large scale is the careful preservation of all organic matter, the whole country

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over, and such a demand for it on the part of farmers as should make the preservation profitable. Under this system our soil and our country will both become richer and richer forever.

At present our large cities and villages are constant drains upon the fertility of our soil, and the farmers by their carelessness institute many others on their own premises. Through the sewers of New York, and by the throwing of the dirt from the streets into the waters of the ocean, enough organic matter is annually lost to produce an almost incalculable amount of vegetation that now never sees the light. It could in fact be changed into food, ton for ton. It is idle to sneer at this. This is the grand chemistry of the Almighty. But now, the loss of this nation by this unpardonable waste, is far greater than though all the notes of some one of the heaviest banks should annually be burned up. This latter would but exchange the place of wealth, the former actually obliterates it. I believe the farmer like the manufacturer, should buy his raw material and make his money by improving and changing that material. For all that he sends off his farm he should supply an equivolent in weight, but not in value, for what he receives in a disorganized state in the form of manure would be cheap, but what he sells will be the same substance now transformed into the basis of manufactures or the beautiful fruit, and the golden grain, by the power of Nature under the superintendence of man. This may be deemed inapplicable or unpracticable to western farmers on strong new soils, but a general principle and unalterable truth ought never to be forgotten; and unless constantly replenished and fed, these virgin soils of the West will yet become as barren as the once fertile hill-sides of Judea, and plains of Babylon.

But, gentlemen, it is not possible for me to enter into the minutiæ of your art; you do not expect it; the general principles only can be glanced at. If what I have attempted to show is true—that the culture of the earth underlies and sustains all other industry, conduces more than any other art to the harmonious development of human health, intellect and morals; if it be true that the soil and air have resources for man's support as yet but very partially revealed, and that the increasing population of the nations clamorously demand more food and must be driven ere long to great pestilences and wars as their greatest benefactors unless these hidden resources are discovered, I ask every

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wise man and good man to consider these questions: Ought notfarming in all its branches, to be studied as a science? Ought not States to foster it by their laws, and if need be, by their funds? Ought not genuine agricultural schools to be established? Ought not associations of farmers for mutual benefit and action, to be encouraged and perpetuated? Ought not "he who makes two blades of grass to grow where there was but one before," to be honored as a benefactor? Ought not the combined intellect of tens of thousands to be employed to eradicate thorns and thistles, the curse of a sinful race, and to make the whole earth a productive garden?

Then, when wildernesses blossom and deserts smile, and the world puts on an Eden dress, we may expect that the moral and religious character of man will be perfect, corresponding with the Paradise in which he will dwell; then, poisons will be eradicated or curtailed to their proper proportions, and used only as medicines; then, rocks will no longer be unsightly deformities, but useful for shelter and defences; then, the bowels of the earth will give up their mineral treasures to man; the mountain sides will be clothed with verdure, and the valleys abound in luxuries; then, by the winds and waters over the oceans and through the rivers, will the produce of nations be interchanged; then, will every science and every art be encouraged, and while the body is fed, the mind be disciplined, and the soul perfected; and battle fields forgotten, and wild wastes remembered only in history, the whole earth become a suitable seminary for the generations, a preparatory school for Heaven. Less than this, certainly, should not be our object; less than this we will believe, shall not be the ultimate reward of industry and science.

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APPENDIX,

CONTAINING THE

STATISTICS OF MICHIGAN:

COMPILED FROM THE

CENSUS OF 1854.

Condensed for Publication by the Secretary of State of the State of Michigan, in pursuance of an Act of the Legislature, approved February 9, 1853.

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OFFICE OF THE SECRETARY OF STATE,
Lansing, October 2, 1854.

The following tables are compiled from the Census and Statistical returns made to this Department, in pursuance of an act of the Legislature of the State of Michigan, entitled, "An act to provide for taking the Census and Statistics of this State;" approved, February 9th, 1853.

WM. GRAVES,
Secretary of State.

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ALLEGAN COUNTY.

TOWNSHIPS.	NO. OF MALES.										
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over Seventy-five and under Ninety.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Allegan,	76	73	129	247	51	-	--	--	199	--
Cheshire,	20	18	21	40	14	-	--	--	41	13
Dorr,	25	10	18	30	10	-	--	--	35	5
Fillmore,	54	28	90	86	54	2	--	--	114	30
Ganges,	45	30	38	15	--	-	1	--	65	--
Gun Plain,	48	50	93	110	50	3	--	--	127	34
Heath,	25	4	11	39	8	-	--	--	34	9
Hopkins,	14	18	17	34	9	1	--	--	34	9
Leighton,	39	34	45	55	18	2	--	--	59	16
Manlius,	9	14	15	51	8	-	--	--	28	--
Martin,	52	39	56	98	26	1	--	--	91	--
Monterey,	50	53	63	86	19	-	--	--	88	183
Newark,	72	25	35	151	32	1	--	--	98	218
Otsego,	88	85	120	186	64	1	--	--	199	25
Pine Plains,	10	4	8	9	11	-	--	--	24	43
Trowbridge,	45	47	71	88	27	-	--	--	85	31
Watson,	32	50	40	89	17	-	--	--	70	17
Wayland	31	29	33	67	22	-	--	--	70	18
Total.	735	611	903	1,481	440	11	1	--	1,461	651

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ALLEGAN COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Allegan,	83	84	91	228	59	----	201	------
Cheshire,	16	15	14	31	16	----	41	5
Dorr,	19	6	14	30	8	----	35	3
Fillmore,	52	26	46	67	66	----	110	18
Ganges,	36	24	27	56	16	----	60	------
Gun Plain,	49	49	56	107	55	----	127	26
Heath,	10	10	7	29	9	----	36	2
Hopkins,	20	12	15	26	14	----	31	5
Leighton,	27	20	34	44	32	----	59	17
Manlius,	8	6	10	22	11	----	27	------
Martin,	33	29	52	77	29	----	88	------
Monterey,	39	40	33	77	27	----	88	127
Newark,	50	25	36	99	25	2	101	136
Otsego,	77	69	112	170	80	2	199	------
Pine Plains,	3	4	6	10	3	----	----	------
Walbridge,	38	38	46	79	22	1	88	19
Watson,	48	24	45	68	30	----	92	------
Wayland	31	15	21	55	22	----	68	29
Total,	639	496	665	1,275	524	5	1,451	387

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ALLEGAN COUNTY.—CONTINUED.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year	Number of Deaths preceding year	No of Males.	No. of Females	No. of Blind	No. of Deaf and Dumb.	No. of Insane or Idiotic	No. of Colored Persons.	TOTAL.
--	--	--	--	9	---	576	545	--	--	--	----	1121
1	--	2	--	2	3	113	92	1	--	2	----	208
--	--	--	1	1	1	93	77	--	--	--	1	171
--	--	1	--	6	12	314	257	--	--	1	----	572
--	--	--	--	----	---	129	159	--	--	--	----	288
--	--	1	--	5	15	354	316	--	--	1	----	671
--	--	--	--	3	2	87	65	--	--	--	----	152
--	--	--	--	2	1	93	87	--	--	--	----	180
1	--	--	--	3	5	193	157	1	--	--	----	351
--	--	1	--	3	2	97	57	--	--	1	----	155
--	--	--	--	3	9	272	220	--	--	--	----	492
--	3	--	--	3	6	271	216	--	3	--	----	490
--	2	--	--	12	6	316	237	--	2	--	----	555
--	1	1	--	6	10	544	510	--	1	1	----	1059
--	--	--	--	----	1	42	26	--	--	--	----	68
--	--	--	--	6	5	278	224	--	--	--	----	502
--	--	--	--	1	3	228	215	--	--	--	----	443
--	--	--	--	4	3	182	144	--	--	--	----	326
2	6	6	1	69	84	4,182	3,604	2	6	6	1	7,804

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ALLEGAN COUNTY.—CONTINUED.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised preceding year
Allegan,	30004	-----	2163	376	311	8102
Cheshire,	3147	-----	260	75	113	3470
Dorr,	2734	-----	162	36	61	1742
Fillmore,	8400	440	1300	255	353	7562
Ganges,	5354	-----	697	108	201	4635
Gun Plain,	12446	-----	4870	1152	701	16835
Heath,	3375	-----	195	57	65	935
Hopkins,	17905	-----	343	38	70	710
Leighton,	5030	40	491	144	163	3390
Manlius,	3382	260	268	63	72	1585
Martin,	17741	-----	2541	890	291	8716
Monterey,	8555	-----	1994	747	336	10248
Newark,	23145	-----	555	51	124	2506
Otsego,	11205	-----	2829	608	607	17800
Pine Plains,	1163	-----	310	42	163	1100
Trowbridge,	8450	-----	1602	377	3731	11933
Watson,	7835	-----	1530	459	292	8655
Wayland,	6628	-----	868	187	124	3580
Total,	176,499	740	22,978	5,665	7,818	113,504

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ALLEGAN COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
281	4408	1884	3222	712	920	3344
54	900	175	1898	98	-----	300
57	855	136	1136	71	-----	500
193	2363	3164	4362	254	44	4838
143	1590	724	5345	196	316	11530
929	13205	4716	5800	1221	4269	27837
37	654	163	623	60	45	950
46	549	442	921	225	255	2818
106	1545	380	1729	95	32	3315
13	135	626	2445	83	53	--------
727	12040	2808	3011	290	2080	12099
498	914	2216	2349	354	905	8787
36	503	961	2953	120	-----	16528
551	8776	2368	6433	537	2110	10554
13	250	---- ----	300	90	-----	3100
277	449	678	4681	678	1548	6211
515	5077	1280	2786	364	732	6000
134	1752	430	2039	101	47	1350
4,610	55,965	23,151	52,033	5,549	13,356	120,061

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ALLEGAN COUNTY.—CONTINUED.

TOWNSHIPS.	PRODUCE					
	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	No. of Horses 1 year old and over.	No. of Neat Cattle other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Allegan,	5490	350	5010	113	219	130
Cheshire,	2332	------	2442	7	22	30
Dorr,	312	------	4270	4	29	30
Fillmore,	7889	------	1125	13	242	144
Ganges,	4150	40	2675	17	62	49
Gun Plain,	6234	2444	3268	148	406	120
Heath,	1325	------	301	8	22	39
Hopkins,	3830	780	10244	25	96	20
Leighton,	2550	150	6550	56	61	48
Manlius,	2025	------	25	18	45	39
Martin,	4015	360	13345	88	193	86
Monterey,	8391	100	8045	38	136	92
Newark,	4370	100	1965	36	71	66
Otsego,	9210	600	6740	132	240	133
Pine Plains,	450	------	250	6	15	12
Trowbridge,	8048	890	10040	66	175	82
Watson,	7835	225	16870	36	139	103
Wayland,	4425	200	2176	40	113	63
Total,	102,881	6,239	95,341	851	2,286	1,286

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ALLEGAN COUNTY.—Continued.

LIVE STOCK.				FLOURING MILLS.						
							Power Used.			
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Steam.	Water.	No. of Persons employed.	Amount of Capital invested.
185	493	432	--	2	4	9800	----	2	4	$11500 00
37	----	43	--	--	---	------	----	---	--	----------
34	6	40	--	--	---	------	----	---	--	----------
191	36	430	--	--	---	------	----	---	--	----------
82	63	187	--	--	---	------	----	---	--	----------
265	1957	462	--	1	2	80	----	1	3	3000 00
32	27	81	--	--	---	------	----	---	--	----------
71	83	67	--	--	---	------	----	---	--	----------
77	23	141	--	--	---	------	----	---	--	----------
31	19	101	--	--	---	------	----	---	--	----------
157	758	375	--	--	---	------	----	---	--	----------
138	325	301	--	--	---	------	----	---	--	----------
109	236	---	2	--	---	------	----	---	--	----------
242	693	481	--	2	6	2500	----	2	3	10000 00
22	----	25	--	--	---	------	----	---	--	----------
181	350	290	--	--	---	------	----	---	--	----------
137	268	246	--	--	---	------	----	---	--	----------
115	117	189	--	--	---	------	----	---	--	----------
2,106	5454	3,891	2	5	12	12,380	----	5	10	$24,500 00

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ALLEGAN COUNTY.—CONTINUED.

TOWNSHIPS.	SAW MILLS.						
	Value of Products for the past year.	No. of—	No. of Feet of Lumber sawed the past year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested.
Allegan,	$56000 00	5	5230000		5	38	$14000 00
Cheshire,		1	100000		1	1	600 00
Dorr,							
Fillmore,							
Ganges,		2	150000		2	2	*
Gun Plain,	700 00	3	370000	1	2	6	3200 00
Heath,		1	100000		1	3	4000 00
Hopkins,							
Leighton,							
Manlius,		1	500000		1		3000 00
Martin,		1	50000		1		600 00
Monterey,		1	75000		1	1	700 00
Newark,		4	4710000	3	1	81	33100 00
Otsego,	1400 00	5	1000000		5	8	8000 00
Pine Plains,							
Trowbridge,		3	300000		3		2000 00
Watson,							
Wayland		2	520000	2			2400 00
Total,	$58,100 00	29	13,105,000	6	23	140	$71,600 00

* Not stated.

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ALLEGAN COUNTY.—Continued.

	OIL MILLS.			BREWERIES.		DISTILLERIES.			
Value of Products for the past year.	No. of—	No. of Barrels of Oil made the preceding year.	No. of Barrels of Peppermint Oil manufactured the preceding year.	No. of—	No. of Barrels of Beer made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.
$32500 00	--	----	----	--	------	--	---- ----	------	----
250 00	--	----	----	--	------	--	---- ----	------	----
---- ---- ----	--	----	----	--	------	--	---- ----	------	----
---- ---- ----	--	----	----	--	------	--	---- ----	------	----
*	--	----	----	--	------	--	---- ----	------	----
2420 00	--	----	----	--	------	--	---- ----	------	41½
1200 00	--	----	----	--	------	--	---- ----	------	----
---- ---- ----	--	----	----	--	------	--	---- ----	------	----
---- ---- ----	--	----	----	--	------	--	---- ----	------	----
350 00	--	----	----	--	------	--	---- ----	------	----
*	--	----	----	--	------	--	---- ----	------	----
*	--	----	----	--	------	--	---- ----	------	----
36800 00	--	----	----	--	------	--	---- ----	------	----
7000 00	--	----	----	--	------	--	---- ----	------	----
---- ---- ----	--	----	----	--	------	--	---- ----	------	----
*	--	----	----	--	------	--	---- ----	------	----
---- ---- ----	--	----	----	--	------	--	---- ----	------	----
3640 00	--	----	----	--	------	--	---- ----	------	----
$84,160 00	--	----	----	--	------	--	---- ----	------	41½

* Not stated.

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ALLEGAN COUNTY.—CONTINUED.

TOWNSHIPS.	FISH.	AGGREGATE OF ALL KINDS OF MANUFACTORIES.				
	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.	No. of	Kind of Mineral.
Allegan,						
Cheshire,						
Dorr,						
Fillmore,						
Ganges,						
Gunplain,						
Heath,						
Hopkins,						
Leighton,						
Manlius,						
Martin,						
Monterey,						
Newark,		$11000 00	13	$22000 00		
Otsego,						
Pine Plains,						
Trowbridge,						
Watson,						
Wayland,						
Total,		$11,000 00	13	$22,000 00		

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ALLEGAN COUNTY.—Continued.

MINES WORKED.				
Aggregate quantity of Mineral, in pounds, produced the past year.	Aggregate valuation at place of mining of minerals produced the past year.	No of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
				$35,523 00
				2,100 00
				33,950 00
				40,000 00
				$111,573 00

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BARRY COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over Seventy-five and under Ninety.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Assyria,	57	47	42	96	29	1			103	14
Baltimore	26	24	30	45	5				51	4
Barry,	49	44	68	132	34	1			127	40
Carlton,	32	33	45	38	14	2	2		68	16
Castleton,	44	51	50	65	22				79	9
Hastings,	85	73	115	200	56	3			208	45
Hope,	23	18	35	55	19	1			59	92
Irving,	43	22	57	73	19				80	134
Johnstown,	43	51	79	112	39				120	204
Maple Grove,	29	29	44	67	19	1			66	20
Orangeville,	41	36	57	84	24	1			78	29
Prairieville,	59	43	70	126	37	1			115	46
Rutland,	27	30	46	55	28	1			66	17
Thornapple,	59	35	58	98	37				97	37
Woodland,	63	51	67	109	26				107	22
Yan. Springs,	21	27	36	55	18	1			51	107
Total,	701	614	899	1,440	426	13	2		1,475	836

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BARRY COUNTY—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Assyria,	52	34	55	81	34	----	105	7
Baltimore,	24	25	13	51	7	----	55	-------
Barry,	55	43	61	99	43	----	126	17
Carlton,	29	24	36	62	31	3	66	28
Castleton,	38	38	33	63	22	----	79	8
Hastings,	92	70	95	182	69	1	211	39
Hope,	26	20	19	49	22	----	59	90
Irving,	34	33	28	69	26	1	79	112
Johnstown,	49	37	57	100	56	10	120	189
Maple Grove,	26	18	32	52	22	----	66	7
Orangeville,	38	42	42	74	26	----	77	16
Prairieville,	54	44	63	112	40	3	119	30
Rutland,	22	17	36	55	24	1	62	13
Thornapple,	37	28	48	85	37	2	100	29
Woodland,	60	38	55	94	33	1	116	7
Yan. Springs,	16	19	31	46	20	----	51	81
Total,	652	530	704	1,274	512	22	1,469	673

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BARRY COUNTY.—CONTINUED.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
..	..	..	..	7	2	272	256	..	..	..	..	528
..	..	..	..	..	..	130	120	..	..	..	..	250
..	..	1	9	16	8	328	301	..	..	1	9	639
..	1	1	..	..	3	196	185	..	1	1	..	383
..	..	..	1	4	..	232	194	..	..	..	1	427
..	..	3	..	8	19	532	509	..	..	3	..	1044
..	..	..	3	7	6	151	136	..	..	..	3	290
..	..	..	..	5	5	214	191	..	..	..	..	405
..	..	..	..	2	1	324	309	..	..	..	..	633
..	1	1	..	5	1	189	150	..	1	1	..	341
1	..	1	1	4	2	243	222	1	..	1	1	468
..	1	2	1	10	2	336	316	..	1	2	1	656
..	..	3	..	1	1	187	155	..	..	3	..	345
..	..	..	..	9	2	287	237	..	..	..	..	524
..	..	1	..	6	3	316	281	..	..	1	..	598
..	..	..	..	1	2	158	132	..	..	..	..	290
1	3	13	15	85	57	4,095	3,694	1	3	13	15	7,821

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BARRY COUNTY.—Continued.

TOWNSHIPS.	LAND. Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year
Assyria,	10090	-----	2458	989	1326	7405
Baltimore,	3480	-----	292	116	85	2855
Barry,	19780	-----	3426	1450	793	20365
Carlton,	5031	-----	1199	398	198	4104
Castleton,	19159	-----	1270	355	236	5631
Hastings,	23357	-----	1173	345	307	7804
Hope,	12701	-----	486	252	176	4150
Irving,	8318	-----	1964	689	446	10021
Johnstown,	10011	40	1816	655	387	8870
Maple Grove,	8077	2	879	348	201	3977
Orangeville,	8380	-----	2607	887	568	13356
Prairieville,	18957	-----	4915	1638	885	25230
Rutland,	18535	-----	1228	419	389	9554
Thornapple,	5222	80	1518	488	367	6945
Woodland,	9769	-----	1647	495	288	9729
Yan. Springs	16397	-----	1919	340	374	8883
Total,	197,264	122	27,897	9,864	7,026	148,879

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BARRY COUNTY.—CONTINUED.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
881	3023	3283	2354	1893	2800	12461
181	1300	3447	1174	85	300	3700
1405	21576	4611	5687	661	4231	16936
331	5490	2133	1932	236	829	600
325	4851	1797	2577	295	897	4260
182	2514	1232	5418	232	75	9401
153	1852	731	1638	271	125	483
543	7347	624	2531	680	1805	8345
637	8276	3718	3374	805	3218	9250
219	3308	895	1451	286	411	3718
637	10604	1360	5707	1040	3239	7378
1397	20432	5484	5413	943	6860	20757
249	3220	653	4980	456	227	8930
4396	5153	2344	3287	391	1118	7008
438	7236	4839	3795	427	1108	6936
302	3262	1068	5131	798	1442	6460
8,176	109,444	37,219	57,449	9,499	28,685	126,622

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BARRY COUNTY.—Continued.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, 1 year old and over.	No. of Work Oxen.
Assyria,	7670	1425	2821	88	227	131
Baltimore,	3700	------	1272	17	44	44
Barry,	9780	1260	360	124	161	156
Carlton,	8100	180	8905	30	135	99
Castleton,	5799	315	22660	43	152	72
Hastings,	15760	950	11605	98	106	107
Hope,	5145	20	65	20	19	60
Irving,	10130	300	2491	72	238	92
Johnstown,	15085	470	470	66	227	136
Maple Grove,	8531	450	18133	38	84	73
Orangeville,	12385	420	50	66	144	125
Prairieville,	12934	325	------	163	211	103
Rutland,	4500	------	400	42	108	77
Thornapple,	9639	50	4430	70	139	89
Woodland,	14015	750	21429	76	189	120
Yan. Springs,	10205	790	460	60	285	69
Total,	143,618	7,705	95,555	1,073	12,469	1,553

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BARRY COUNTY.—Continued.

STOCK.				FLOURING MILLS.					
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.
219	1165	373	2	--	--	----------	----	---	----
51	144	116	--	--	--	----------	----	---	----
230	1727	448	--	--	--	----------	----	---	----
121	298	222	--	--	--	----------	----	---	----
137	303	296	--	--	--	----------	----	---	----
182	44	262	--	1	2	1000	----	1	2
61	91	102	--	--	--	----------	----	---	----
163	804	112	--	--	--	----------	----	---	----
209	1058	391	--	--	--	----------	----	---	----
118	138	263	--	--	--	----------	----	---	----
152	1434	296	--	--	--	----------	----	---	----
226	2668	549	--	--	--	----------	----	---	----
109	212	226	--	--	--	----------	----	---	----
139	331	292	--	1	2	2500	----	1	2
205	436	421	--	--	--	----------	----	---	----
141	901	214	--	--	--	----------	----	---	----
2,463	11,754	4,583	2	2	4	3,590	----	2	4

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BARRY COUNTY.—Continued.

TOWNSHIPS.	Amount of Capital invested	Value of Products for the past year.	SAW				
			No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
					Steam.	Water.	
Assyria,			1	*		1	1
Baltimore,			1	300000		1	2
Barry,							
Carlton,			1	100000		1	4
Castleton,			3	260000	2	1	4
Hastings,	4000	1000	4	825000		4	5
Hope,			1	100000		1	1
Irving,			2	400000	2		6
Johnstown,			1	275000		1	1
Maple Grove,							
Orangeville,			3	800000		3	4
Prairieville,			1	300000		1	
Rutland,							
Thornapple,	3000	*	1	50000		1	1
Woodland,							
Yan. Springs,			3	680000		3	4
Total,	7,000	1,000	22	4,090,000	4	18	33

* Not stated.

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BARRY COUNTY.—Continued.

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested	Value of Products for the past year.	No. of—	No. of Barrels of Oil made the preceding year.	No. of Barrels of Peppermint Oil manufactured the preceding year.	No. of—	No. of Barrels of Beer Made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.
500	*	--	--	--	--	--	--	--
1500	$1800	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
200	800	--	--	--	--	--	--	--
2000	480	--	--	--	--	--	--	--
3900	2475	--	--	--	--	--	--	--
800	600	--	--	--	--	--	--	--
1500	750	--	--	--	--	--	--	--
500	300	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
6300	900	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
500	300	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
2800	*	--	--	--	--	--	--	--
20,500	$8,405	--	--	--	--	--	--	--

* Not stated.

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BARRY COUNTY.—CONTINUED.

TOWNSHIPS.	DISTILLERIES.		FISH.	AGGREGATE OF ALL KINDS OF MANUFACTORIES.			
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed	Value of Products for the past year.	No. of—
Assyria,							
Baltimore,							
Barry,							
Carlton,							
Castleton,							
Hastings,							
Hope,							
Irving,							
Johnstown,							
Maple Grove,			12				
Orangeville,							
Prairieville,							
Rutland,							
Thornapple,							
Woodland,							
Yan. Springs,							
Total,			12				

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BARRY COUNTY.—Continued.

MINES WORKED.					
Kind of Mineral.	Aggregate quantity of Mineral, in Pounds, produced the past year.	Aggregate valuation at place of mining of minerals produced the past year	No. of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
					$71700 00
					750 00
					$72,450 00

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BERRIEN COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Bainbridge,	61	61	63	111	44	1	..	..	119	228
Berrien,	79	79	138	160	65	2	..	..	111	49
Bertrand,	95	85	143	158	73	3	..	..	181	55
Benton,	57	56	61	113	39	..	..	..	109	215
Buchanan,	122	114	161	211	65	2	..	..	223	452
Galien,	50	32	49	85	17	..	..	..	69	31
Hagar,	29	26	19	62	20	1	..	..	45	97
Lake,	19	16	23	20	14	..	..	..	46	10
New Buffalo,	78	61	95	186	58	..	..	..	163	79
Niles,	262	254	400	551	227	5	..	..	585	1112
Oronoko,	102	56	101	133	47	2	..	..	148	293
Pipestone,	83	75	93	144	38	..	..	..	149	33
Royalton,	36	50	57	55	35	1	..	..	76	12
St. Joseph,	73	47	56	188	39	1	..	..	117	287
Watervliet,	52	38	57	108	37	..	..	..	108	37
Weesaw,	44	24	36	86	20	..	..	..	83	11
Total,	1,242	1,074	1,552	2,371	838	18	..	..	2,332	3,001

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BERRIEN COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age	Over Five and under Ten	Over Ten and under Eighteen	Over Eighteen and under Forty	Over Forty and under Seventy-five	Seventy-five and over	Married	Unmarried
Bainbridge,	58	45	42	93	53	1	118	164
Berrien,	86	73	93	145	78	1	112	33
Bertrand,	81	79	124	142	93	8	189	48
Benton,	78	47	55	102	35	...	114	203
Buchanan,	109	89	130	206	72	1	226	381
Galien,	34	23	27	64	23	...	69	19
Hagar,	18	15	24	44	10	...	45	64
Lake,	20	8	11	25	7	...	46	13
New Buffalo,	75	51	73	148	48	...	163	34
Niles,	252	259	391	643	229	1	589	1186
Oronoko,	89	63	77	144	53	6	158	277
Pipestone,	86	60	55	126	34	1	150	11
Royalton,	49	33	43	59	32	2	75	8
St. Joseph,	49	33	61	122	32	2	121	178
Watervliet,	41	42	48	89	32	1	110	15
Weesaw,	45	31	25	76	17	...	87	3
Total,	1,170	951	1,279	2,228	848	24	2,372	2,637

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BERRIEN COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
--	--	--	---	10	12	341	292	--	--	--	----	633
1	1	6	15	9	14	523	476	1	1	6	15	1022
1	--	--	---	29	31	557	527	1	--	--	----	1085
--	--	--	---	4	5	326	317	--	--	--	----	643
--	--	4	---	12	9	675	607	--	--	4	----	1286
--	--	1	---	3	5	233	171	--	--	1	----	405
--	--	--	---	---	---	157	111	--	--	--	----	268
--	--	--	---	4	2	92	71	--	--	--	----	163
1	--	--	21	14	21	478	395	1	--	--	21	895
--	--	--	168	5	5	1699	1775	--	--	--	168	3642
--	--	2	---	4	5	441	432	--	--	2	----	875
--	2	--	26	3	9	433	362	--	2	--	26	823
1	--	--	---	---	2	234	218	1	--	--	----	453
--	--	1	1	5	13	404	299	--	--	1	1	705
--	2	--	---	4	7	292	253	--	2	--	----	547
--	--	--	---	---	---	210	194	--	--	--	----	404
4	5	14	231	106	140	7,095	6,500	4	5	14	231	13,849

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BERRIEN COUNTY.—Continued.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year
Bainbridge,	22540	-----	4304	760	809	16078
Berrien,	13465	-----	5518	1060	1551	41209
Bertrand,	18414	-----	11053	3901	2801	101714
Benton,	21855	83	2103	213	393	11440
Buchanan,	18245	-----	3450	670	1032	38235
Galien,	6575	112	963	213	402	11325
Hagar,	9247	-----	475	21	------	3614
Lake,	5467	3	728	130	269	7983
New Buffalo,	12915	-----	1357	135	288	10230
Niles,	28102	-----	7815	1709	2301	81171
Oronoko,	9179	-----	2857	613	879	34150
Pipestone,	30115	7	2232	401	596	18709
Royalton,	8175	-----	949	142	225	10630
St. Joseph,	699	-----	200	11	21	406
Watervliet,	5838	-----	1272	218	312	7755
Weesaw,	6352	-----	792	172	279	8286
Total,	217,183	205	46,058	10,339	12,158	402,935

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BERRIEN COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year	No. of Bushels of all other kinds of Grain raised the preceding year	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year
778	9708	4127	9258	596	2865	17768
1014	14990	7835	7398	456	5062	83583
2751	54042	24716	11636	986	8700	157231
168	2167	1722	6837	842	984	9230
588	10693	4982	6449	1144	1839	23065
209	3139	1276	1898	231	225	19952
----	507	1005	2530	95	------	-------
242	1825	834	5127	651	174	4350
117	1598	930	3930	486	109	7610
1330	22939	12866	15346	804	5250	282753
340	5009	4435	4987	1049	4340	29000
333	5084	562	5700	370	1070	20416
111	1703	135	4132	201	293	8530
4	100	200	1125	142	30	300
283	3723	1112	5370	208	583	2716
154	2068	297	2589	160	224	4846
8,422	139,295	67,034	94,310	8,421	31,748	671,370

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BERRIEN COUNTY.—CONTINUED.

TOWNSHIPS	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the present year.	LIVE STOCK. No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Bainbridge,	12530	1712	289	113	275	142
Berrien,	12381	-------	4503	294	407	78
Bertrand,	29675	632	25	537	656	73
Benton,	8571	140	810	102	158	138
Buchanan,	16855	100	5080	214	300	137
Galien,	3776	320	1800	79	126	54
Hagar,	-------	-------	-------	14	40	54
Lake,	4490	-------	168	50	138	64
New Buffalo,	6665	-------	1340	62	157	150
Niles,	25938	2970	9542	610	503	130
Oronoko,	7310	677	1137	270	350	91
Pipestone,	9500	6425	776	131	254	153
Royalton,	1175	-------	100	91	141	72
St. Joseph,	800	-------	-------	27	58	38
Watervliet,	9600	380	2985	57	83	70
Weesaw,	4871	-------	2716	62	146	66
Total,	154,137	13,356	31,271	2,713	3,792	1,510

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BERRIEN COUNTY.—Continued.

No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	FLOURING MILLS. No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Water.	No. of Persons employed.	Amount of Capital invested
232	1123	713	..	..	..	.....	....	....	....	.....
303	2067	1623	1	..	..	.....	....	....	....	.....
470	2840	1915	..	2	4	3300	....	2	3	$6300 00
189	395	226	..	..	..	.....	....	....	....	.....
330	758	1027	..	..	..	.....	....	....	....	.....
99	94	562	..	..	..	.....	....	....	....	.....
63	.....	136	..	..	..	.....	....	....	....	.....
88	54	364	..	..	..	.....	....	....	....	.....
136	60	323	..	..	..	.....	....	....	....	.....
797	1783	2082	..	4	6	39500	1	3	11	16000 00
200	1552	955	..	..	..	.....	....	....	....	.....
278	403	673	..	1	1	.....	....	1	1	1200 00
125	126	351	..	..	..	.....	....	....	....	.....
30	53	36	..	..	..	.....	....	....	....	.....
127	133	343	..	1	2	3000	....	1	1	3000 00
127	90	473	..	..	..	.....	....	....	....	.....
3,594	11,531	11,812	1	8	13	45,800	1	7	16	$26,500 00

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BERRIEN COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW MILLS. No. of—	No. of Feet of Lumber sawed the past year.	Power Used. Steam.	Water.	No. of Persons employed.
Bainbridge,						
Berrien,		4	950000		4	12
Bertrand,	$25500 00					
Benton,		2	850000	*	*	3
Buchanan,		6	1325000	6		15
Galien,		2	200000		2	2
Hagar,						
Lake,		2	240000		2	3
New Buffalo,		9	846000	2	7	40
Niles,	244000 00	5	2020000		4	7
Oronoko,		3	462000	*	*	8
Pipestone,	†	4	950000		4	19
Royalton,						
St. Joseph,		2	6000000	2		75
Watervliet,	15000 00	2	1400000	1	1	12
Weesaw,		4	411171		4	5
Total,	$285,000 00	45	15,645,171	11	28	201

* Not stated.

† New Mill.

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BERRIEN COUNTY.—CONTINUED.

		OIL MILLS.			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of Barrels of Oil made the preceding year	No. of Barrels of Peppermint Oil manufactured the preceding year	No. of—	No. of Barrels of Beer made the preceding year	No. of—	No. of Gallons of Liquor made the preceding year
$4700 00	$4300 00							
5000 00	4800 00							
9300 00	*							
1300 00	1400 00							
2400 00	820 00							
18100 00	8310 00							
6500 00	12160 00							
*	1700 00							
2600 00	2150 00							
30000 00	60000 00							
8000 00	31000 00							
3800 00	1400 00							
$91,700 00	$128,130 00							

* Not stated.

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BERRIEN COUNTY.—Continued.

TOWNSHIPS.	DISTILLERIES.		FISH.	AGGREGATE OF ALL KINDS OF MANUFACTORIES.		
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Bainbridge,						
Berrien,						
Bertrand,						
Benton,						
Buchanan,						
Galien,						
Hagar,						
Lake,						
New Buffalo,						
Niles,				$15700 00	45	38000 00
Oronoko,						
Pipestone,						
Royalton,						
St. Joseph,				1000 00	9	2300 00
Watervliet,						
Weesaw,						
Total,				$16,700 00	54	$40,300 00

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BERRIEN COUNTY.—Continued.

MINES WORKED.						
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in pounds, produced the past year.	Aggregate valuation at Place of mining of minerals produced the past year.	No of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
						$25500 00
						193155 00
						84000 00
						$302,655 00

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BRANCH COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over Seventy-five and under Ninety.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Algansee,	71	66	114	134	62	--	--	--	160	33
Batavia,	68	73	133	149	62	1	--	--	167	45
Bethel,	80	70	95	149	39	3	--	--	117	220
Bronson,	74	64	110	165	45	--	--	--	112	53
Butler,	70	54	104	137	46	2	1	--	147	37
California,	33	39	86	76	39	--	--	--	51	26
Coldwater,	213	198	348	602	185	5	--	--	449	153
Girard,	66	78	136	151	74	2	--	--	186	40
Gilead,	47	39	85	76	36	3	--	--	98	32
Kinderhook,	31	37	55	58	21	3	--	--	83	31
Matteson,	72	52	82	109	33	--	--	--	120	22
Noble,	32	38	85	81	29	1	--	--	84	181
Ovid,	87	77	124	163	57	1	--	--	130	31
Quincy,	92	104	170	225	91	2	1	--	271	59
Sherwood,	56	75	121	148	55	3	--	--	101	37
Union,	110	103	188	216	105	4	--	--	266	460
Total,	1,202	1,167	2,036	2,639	979	30	2	--	2,542	1,460

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BRANCH COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Algansee,	72	63	81	150	58	6	163	40
Batavia,	76	77	98	145	62	3	171	41
Bethel,	67	80	95	133	36		111	193
Bronson,	62	49	76	145	53	2	120	25
Butler,	63	65	68	132	54	1	150	36
California,	25	41	45	80	39		51	30
Coldwater,	219	212	300	611	197	5	464	147
Girard,	66	68	80	153	81		187	52
Gilead,	57	42	47	84	25	4	95	20
Kinderhook,	41	31	44	75	30	4	82	13
Matteson,	59	60	47	112	47	2	123	39
Noble,	31	41	59	76	35	1	83	161
Ovid,	77	74	80	156	63		134	24
Quincy,	103	94	165	227	93	6	267	44
Sherwood,	72	77	93	135	69	4	104	30
Union,	109	115	124	239	106	2	269	426
Total,	1,199	1,189	1,502	2,653	1,048	40	2,574	1,321

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BRANCH COUNTY.—CONTINUED.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year	Number of Deaths preceding year	No of Males	No. of Females	No. of Blind	No of Deaf and Dumb	No. of Insane or Idiotic	No. of Colored Persons	TOTAL.
--	--	2	--	6	11	447	430	--	--	2	----	879
2	2	2	--	9	14	486	461	2	2	2	----	953
--	--	--	--	8	47	436	411	--	--	--	----	847
--	--	--	--	6	9	458	387	--	--	--	----	845
--	--	1	--	3	2	414	383	--	--	1	----	798
--	2	--	--	3	2	273	230	--	2	--	----	505
1	1	3	11	23	21	1551	1544	1	1	3	11	3111
--	2	--	--	5	4	507	448	--	2	--	----	957
--	--	--	--	---	6	286	259	--	--	--	----	545
--	--	1	--	9	11	205	225	--	--	1	----	431
--	--	--	--	3	7	348	327	--	--	--	----	675
--	1	--	3	4	6	266	243	--	1	--	3	513
--	--	1	--	6	14	509	450	--	--	1	----	960
--	--	1	--	20	7	685	688	--	--	1	----	1374
--	--	--	--	8	6	458	450	--	--	--	----	908
--	--	2	--	21	21	726	695	--	--	2	----	1423
3	8	13	14	134	188	8,055	7,631	3	8	13	14	15,724

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BRANCH COUNTY.—Continued.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised preceding year
Algansee,	21786	2	4120	1053	769	24651
Batavia,	21401	120	4585	904	984	24892
Bethel,	15582	-----	3373	962	649	15452
Bronson,	22850	82	3717	816	578	13235
Butler,	12397	-----	3521	969	605	16435
California,	13360	-----	3540	896	526	16516
Coldwater,	20895	82	7278	1435	1237	33052
Girard,	17516	-----	7055	1641	1106	34940
Gilead,	37036	-----	3882	2319	933	32529
Kinderhook,	7788	-----	1286	879	740	17607
Matteson,	10566	-----	3308	869	826	20023
Noble,	9644	-----	3485	909	823	15280
Ovid,	14110	-----	4120	1058	814	23132
Quincy,	17695	-----	5493	1464	826	37086
Sherwood,	16351	-----	5959	1837	1082	25215
Union,	15549	-----	4763	1066	917	23775
Total,	274,526	286	69,485	19,077	13,415	373,820

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BRANCH COUNTY.—CONTINUED.

PRODUCE.						
No. of Acres of Wheat harvested preceding year....	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.....	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.....	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
893	15001	5883	5748	894	3834	18807
920	11363	4220	8873	682	3349	19514
477	8315	925	1230	649	517	7500
649	9656	2404	5015	829	4504	10305
677	9123	3327	3938	977	4685	12716
799	8441	2857	3742	662	2050	4026
1024	16438	5230	10544	1112	6752	14331
1465	23081	6014	8278	975	10234	14382
1108	16521	3093	3381	743	3080	14800
1294	10465	2593	4180	1184	1722	5868
1033	10287	2661	6570	1624	2370	22977
845	10508	1315	3015	971	1949	12334
737	9997	2650	7106	849	2517	10470
913	17949	7222	8548	1381	10410	18111
1357	17850	3557	5744	995	4430	20214
773	12979	2812	6631	983	5914	14658
14,964	207,974	56,763	92,543	15,510	68,317	221,013

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BRANCH COUNTY.—Continued.

TOWNSHIPS.	PRODUCE.					
	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	No. of Horses 1 year old and over.	No. of Neat Cattle other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Algansee,	20435	3878	5311	150	382	212
Batavia,	22930	1112	4312	193	328	160
Bethel,	8335	------	100	112	134	105
Bronson,	9995	530	----------	149	282	152
Butler,	23990	1311	12000	121	293	174
California,	12140	205	200	118	250	118
Coldwater,	39900	975	1458	401	329	163
Girard,	22215	1050	5710	248	246	134
Gilead,	12345	900	620	148	265	122
Kinderhook,	9130	-----	----------	129	268	98
Matteson,	15328	2076	2372	142	323	145
Noble,	10865	280	----------	142	279	97
Ovid,	20345	405	2923	156	288	192
Quincy	24234	2851	2545	261	382	241
Sherwood,	19735	940	4587	314	299	169
Union,	17830	855	22641	208	447	213
Total,	289,752	17,368	64,779	2,992	4,793	2,495

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BRANCH COUNTY.—Continued.

LIVE STOCK.				FLOURING MILLS.						
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested.
345	1236	837	--	--	--	-------	----	---	---	----------
344	1314	685	1	--	--	-------	----	---	---	----------
245	252	749	2	--	--	-------	----	---	---	----------
224	2006	520	--	1	2	custom.	----	1	1	$1200 00
270	1939	637	--	--	--	-------	----	---	---	----------
191	784	402	--	--	--	-------	----	---	---	----------
621	2749	981	2	3	9	14500	1	2	7	12000 00
346	4032	542	--	--	--	-------	----	---	---	----------
247	1824	605	--	--	--	-------	----	---	---	----------
193	704	449	--	--	--	-------	----	---	---	----------
274	1092	779	--	--	--	-------	----	---	---	----------
226	697	499	2	--	--	-------	----	---	---	----------
310	1029	590	--	--	--	-------	----	---	---	----------
428	3534	870	--	--	--	-------	----	---	---	----------
325	1791	854	3	--	--	-------	----	---	---	----------
398	2164	907	--	2	8	370	----	2	3	2000 00
4,987	27,147	10,906	10	6	19	14,870	1	5	11	$15,200 00

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BRANCH COUNTY.—CONTINUED.

TOWNSHIPS.	SAW MILLS.					
	Value of Products for the past year.	No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Algansee,		2	400000		2	8
Batavia,		1	200000		1	2
Bethel,		1	200000		1	2
Bronson,	*	6	1825000	2	4	17
Butler,		2	250000	1	1	6
California,						
Coldwater,	$86750 00	3	900000	1	2	6
Girard,		1	300000		1	2
Gilead,		1	300000		1	2
Kinderhook,		1	150000		1	1
Matteson,		1	*	1		3
Noble,		1	60000		1	1
Ovid,		3	1050000		3	6
Quincy,		3	18000	3		21
Sherwood,		2	40000		2	4
Union,	*	4	350000	1	3	6
Total,	$86,750 00	32	6,043,000	9	23	87

* Not stated.

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BRANCH COUNTY.—CONTINUED.

		OIL MILLS.			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of Barrels of Oil made the preceding year.	No. of Barrels of Peppermint Oil manufactured the preceding year.	No. of—	No. of Barrels of Beer Made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.
$2,400 00	$1,700 00	--	----	----	--	------	--	----
2,000 00	1,400 00	--	----	----	--	------	--	----
1,600 00	*	--	----	----	--	------	--	----
7,300 00	13,075 00	--	----	----	--	------	--	----
3,500 00	800 00	--	----	----	--	------	--	----
----------	----------	--	----	----	--	------	--	----
3,000 00	6,400 00	--	----	----	--	------	--	----
2,000 00	900 00	--	----	----	--	------	--	----
2,000 00	2,100 00	--	----	----	--	------	--	----
400 00	180 00	--	----	----	--	------	--	----
2,600 00	*	--	----	----	--	------	--	----
1,000 00	210 00	--	----	----	--	------	--	----
4,300 00	3,760 00	--	----	----	--	------	--	----
6,000 00	5,700 00	--	----	----	--	------	--	----
3,400 00	1,200 00	--	----	----	--	------	--	----
3,200 00	500 00	--	----	----	--	------	--	----
$44,700 00	$37,925 00	--	----	----	--	------	--	----

*Not stated.

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BRANCH COUNTY.—CONTINUED.

TOWNSHIPS.	DISTILLERIES.		FISH.	AGGREGATE OF ALL KINDS OF MANUFACTORIES.		
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Algansee,		7				
Batavia,						
Bethel,						
Bronson,		34				
Butler,						
California,						
Coldwater,						
Girard,						
Gilead,						
Kinderhook,	3	5	6			
Matteson,			4			
Noble,						
Ovid,						
Quincy,						
Sherwood,						
Union,				$2,500 00	*	$1,500 00
Total,	3	46	10	$2,500 00		$1,500 00

*Not stated.

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BRANCH COUNTY.—Continued.

MINES WORKED.							
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in Pounds, produced the past year.	Aggregate valuation at place of mining of minerals produced the past year	No. of Persons employed.	Amount of Capital invested		Value of all Merchandize imported the preceding year for the purpose of sale.
							$23,200 00
							800 00
							280,078 00
							15,000 00
							$319,078 00

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CALHOUN COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Albion,	118	105	269	337	106	6	..	..	326	111
Athens,	46	44	93	99	35	1	..	..	135	24
Battle Creek,	175	157	263	521	136	5	..	..	463	807
Bedford,	59	76	115	141	54	1	..	..	143	303
Burlington,	58	65	108	123	53	2	..	..	128	28
Clarence,	50	54	87	99	54	1	..	..	113	22
Clarendon,	56	58	97	107	59	3	..	..	90	17
Convis,	58	61	117	136	55	1	..	..	154	274
Eckford,	55	54	101	121	52	2	..	..	132	44
Emmett,	131	134	204	369	106	2	..	..	336	125
Fredonia,	49	48	112	101	44	1	..	..	114	26
Homer,	70	84	118	167	63	2	..	..	176	56
Lee,	50	38	69	90	31	.	..	..	91	20
LeRoy,	54	72	128	140	61	1	..	..	164	39
Marengo,	66	75	155	154	62	4	..	..	112	41
Marshall,	303	262	491	796	159	1	..	..	684	1,234
Newton,	45	43	86	113	36	1	..	..	123	30
Pennfield,	71	83	81	118	40	1	..	..	160	233
Sheridan,	72	70	134	173	58	1	..	..	181	48
Tekonsha,	54	43	105	139	53	.	..	..	148	39
Total,	1,640	1,626	2,933	4,044	1,317	36	..	..	3,973	3,521

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CALHOUN COUNTY.—CONTINUED.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Albion,	134	112	205	373	131	5	326	155
Athens,	46	42	60	92	47	1	114	*
Battle Creek,	163	125	204	505	150	5	457	700
Bedford,	53	67	79	132	66	3	143	257
Burlington,	56	62	71	124	60	2	116	24
Clarence,	47	53	60	99	42	1	119	21
Clarendon,	51	50	68	108	65	2	85	23
Convis,	70	60	97	105	74	3	151	258
Eckford,	54	56	73	116	66	1	141	29
Emmett,	109	109	138	362	100	5	335	49
Fredonia,	50	54	70	103	55	1	118	19
Homer,	60	53	92	188	77	5	188	53
Lee,	49	47	65	100	17	1	96	22
LeRoy,	74	81	93	138	77	3	160	45
Marengo,	69	60	97	171	90	3	114	57
Marshall,	271	224	369	755	215	14	683	1,154
Newton,	51	49	57	105	45	1	125	10
Pennfield,	68	63	84	126	71	7	193	226
Sheridan,	81	75	97	173	74	2	188	63
Tekonsha,	62	53	72	134	60	1	151	41
Total,	1,618	1,495	2,151	4,009	1,582	66	4,003	3,206

*Not stated.

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CALHOUN COUNTY.—CONTINUED.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
--	--	2	6	19	20	941	960	--	--	2	6	1,909
--	--	--	---	3	4	318	288	--	--	--	----	606
--	--	1	31	12	19	1,257	1,152	--	--	1	31	2,441
--	2	--	---	1	10	446	400	--	2	--	----	848
1	--	--	8	---	---	409	375	1	--	--	8	793
2	--	2	---	6	11	345	302	2	--	2	----	651
--	--	3	---	6	17	380	344	--	--	3	----	727
--	--	3	1	20	16	428	409	--	--	3	1	841
--	--	--	---	9	11	385	366	--	--	--	----	751
--	--	1	57	3	9	946	823	--	--	1	57	1,827
1	--	1	6	5	4	355	333	1	--	1	6	696
1	--	1	---	13	6	504	475	1	--	1	----	981
--	--	2	15	7	---	278	279	--	--	2	15	574
1	--	2	1	7	11	456	466	1	--	2	1	926
3	--	--	---	11	15	516	490	3	--	--	----	1,009
1	--	--	90	5	28	2,012	1,848	1	--	--	90	3,951
--	--	--	---	8	2	324	308	--	--	--	----	632
--	1	--	1	7	8	394	419	--	1	--	1	815
--	--	2	---	4	16	508	502	--	--	2	----	1,012
1	1	--	---	17	14	394	382	1	1	--	----	778
11	4	20	216	163	221	11,596	10,921	11	4	20	216	22,768

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CALHOUN COUNTY.—CONTINUED.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year
Albion,	20,759	-----	9,329	3,097	1,133	29,125
Athens,	14,189	-----	3,961	1,567	928	20,051
Battle Creek,	16,506	2,727	9,016	2,743	1,247	32,419
Bedford,	14,317	-----	6,106	1,730	976	17,952
Burlington,	9,962	-----	4,349	1,265	718	14,709
Clarence,	7,838	270	796	600	255	4,592
Clarendon,	17,169	-----	4,314	1,418	818	22,145
Convis,	20,272	-----	5,654	1,918	716	12,492
Eckford,	2,240	-----	7,954	2,528	866	18,531
Emmett,	20,798	40	12,592	2,711	1,107	35,685
Fredonia,	21,616	-----	6,234	1,953	626	13,1 0
Homer,	21,552	-----	8,191	2,222	935	24,695
Lee,	7,457	-----	1,928	592	250	2,978
Le Roy,	21,789	320	6,314	2,094	840	19,760
Marengo,	22,444	145	9,455	2,986	966	25,368
Marshall,	13,728	-----	6,054	2,105	777	28,614
Newton,	22,043	-----	4,649	1,725	634	13,392
Penfield,	11,291	-----	5,671	2,619	644	12,070
Sheridan,	13,952	-----	5,513	2,036	899	22,221
Tekonsha,	22,340	-----	2,943	1,332	737	19,082
Total,	322,262	4,102	121,023	39,241	16,072	389,021

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CALHOUN COUNTY.—CONTINUED.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
2,423	45,065	11,726	7,472	674	16,490	43,110
1,193	15,170	2,075	4,436	876	4,122	19,030
2,560	41,510	12,264	6,832	1,838	15,845	42,570
1,235	18,539	4,685	4,245	1,025	5,982	32,785
984	11,929	2,983	4,200	1,625	6,057	16,110
693	7,110	3,009	4,092	1,533	1,7 2	2,500
1,111	15,333	5,847	5,368	1,095	7,295	21,774
1,645	24,558	5,583	6,430	1,521	6,535	19,787
2,164	39,640	6,853	4,809	1,273	14,538	27,985
2,250	37,735	6,095	9,555	1,169	8,000	25,000
1,522	25,388	6,169	6,112	1,219	11,072	19,823
1,903	29,286	6,360	6,343	1,477	12,465	31,422
437	5,922	1,560	2,660	605	831	3,960
1,711	23,852	4,561	7,970	1,272	7,333	22,750
2,491	37,425	9,840	10,031	1,578	40,957	49,141
1,650	24,324	1,743	8,025	1,941	8,661	28,790
1,376	18,306	3,730	6,971	1,163	5,807	10,502
1,303	20,196	4,701	3,645	971	431	14,928
1,578	24,674	5,503	9,419	1,546	10,447	19,929
1,314	14,687	3,849	5,505	857	4,641	19,014
31,543	480,649	109,136	124,120	25,258	189,261	470,910

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CALHOUN COUNTY.—Continued.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, 1 year old and over.	No. of Work Oxen.
Albion,	25,370	2,345		307	287	147
Athens,	20,100	230	3,910	158	205	129
Battle Creek,	31,850	2,260		370	367	165
Bedford,	19,845	445		183	233	123
Burlington,	17,978	640	3,812	172	190	143
Clarence,	15,195	540	710	60	252	144
Clarendon,	16,470	620	590	209	246	155
Convis,	13,190	2,080		177	285	221
Eckford,	22,038	2,370		225	310	158
Emmett,	24,650	550		277	258	184
Fredonia,	21,021	2,570		208	308	169
Homer,	29,920	3,240		215	319	189
Lee,	6,280	200	1,425	45	88	117
Le Roy,	17,040	760	2,335	204	317	188
Marengo,	30,802	4,900		262	317	169
Marshall,	10,325	250		228	298	90
Newton,	13,015	295		150	175	160
Pennfield,	19,780	830	100	174	233	149
Sheridan,	26,226	1,040	60	175	312	212
Tekonsha,	16,395	1,095	1,910	190	294	139
Total,	397,490	27,260	14,852	3,989	5,294	3,151

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CALHOUN COUNTY.—CONTINUED.

STOCK.				FLOURING MILLS.					
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested
363	5,529	538	--	3	10	23,740	----	3	6	*
256	1,720	556	--	--	--	-------	----	---	--	----------
468	11,390	612	2	4	13	65,000	----	4	22	$227,500 00
277	2,135	458	--	--	--	-------	----	---	--	----------
241	1,730	559	--	--	--	-------	----	---	--	----------
231	741	191	--	--	--	-------	----	---	--	----------
324	3,105	611	--	--	--	-------	----	---	--	----------
334	2,648	593	--	--	--	-------	----	---	--	----------
296	5,064	486	--	--	--	-------	----	---	--	----------
410	3,065	732	--	1	3	2,000	----	1	3	3,000 00
309	3,985	456	1	--	--	-------	----	---	--	----------
400	4,625	672	--	1	3	12,000	----	1	3	10,000 00
169	294	366	--	--	--	-------	----	---	--	----------
333	2,759	659	--	--	--	-------	----	---	--	----------
464	6,228	822	--	1	3	5,000	----	1	3	10,000 00
254	3,500	485	--	2	7	*	----	2	*	*
263	2,438	363	--	--	--	-------	----	---	--	----------
269	2,182	406	--	--	--	-------	----	---	--	----------
375	3,156	622	--	--	--	-------	----	---	--	----------
288	2,149	762	--	1	3	5,500	----	1	3	36,521 00
6,324	68,443	10,949	3	13	42	113,240	----	13	40	$287,021 00

*Not stated.

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CALHOUN COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Albion,	$110,000 00	2	*		2	
Athens,		1	350,000		1	2
Battle Creek,	379,000 00	3	250,000		3	6
Bedford,		2	300,000		2	3
Burlington,						
Clarence,		1	536,000	1		4
Clarendon,		3	350,000		3	7
Convis,		4	1,550,000	3	1	11
Eckford,		1	100,000		1	1
Emmett,	10,000 00	4	*		4	6
Fredonia,						
Homer,	4,000 00	1	100,000		1	1
Lee,		1	130,000	1		3
LeRoy,		3	200,000	1	2	3
Marengo,	20,000 00	2	300,000		2	3
Marshall,	*	3	*		3	3
Newton,						
Pennfield,						
Sheridan,		2	105,000		2	3
Tekonsha,	38,365 00	1	145,000	1		2
Total,	$561,365 00	34	4,416,000	7	27	58

*Not stated.

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CALHOUN COUNTY.—CONTINUED.

MILLS.		OIL MILLS			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of barrels of Oil made the preceding year.	No. of Barrels of Peppermint Oil manufactured the preceding year.	No. of—	No. of Barrels of Beer made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.
*	*							
$1,500 00	$500 00							
3,400 00	1,800 00	1	200				1	20,000
3,000 00	2,000 00							
1,000 00	3,416 00							
4,800 00	1,000 00							
7,800 00	5,000 00							
800 00	300 00							
3,800 00	11,075 00							
200 00	300 00							
600 00	600 00							
1,600 00	550 00							
3,500 00	3,150 00							
*	*							
1,100 00	250 00							
500 00	800 00							
$33,600 00	$ 30,741 00	1	200				1	20,000

*Not stated.

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CALHOUN COUNTY.—Continued.

TOWNSHIPS.	Distilleries.		Fish.	Aggregate of all kinds of Manufactories.		
	No. Gallons of Wine made the preceding year	No. of Barrels of Cider made the preceding year	No. of Barrels caught the preceding year	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year
Albion,	198	----	----	$4,000 00	6	$8,000 00
Athens,	------	----	----	----------	----	----------
Battle Creek,	100	50	----	143,750 00	182	146,700 00
Bedford,	------	----	----	----------	----	----------
Burlington,	------	----	----	----------	----	----------
Clarence,	------	----	----	----------	----	----------
Clarendon,	------	----	----	----------	----	----------
Convis,	------	----	----	----------	----	----------
Eckford,	------	----	----	----------	----	----------
Emmett,	------	----	----	----------	----	----------
Fredonia,	------	----	----	----------	----	----------
Homer,	81	15	----	----------	----	----------
Lee,	------	----	----	----------	----	----------
Leroy,	------	10	----	----------	----	----------
Marengo,	------	----	----	----------	----	----------
Marshall,	------	----	----	----------	----	----------
Newton,	------	----	----	----------	----	----------
Pennfield,	------	----	----	----------	----	----------
Sheridan,	------	----	----	----------	----	----------
Tekonsha,	------	----	----	----------	----	----------
Total,	279	75	----	$147,750 00	188	$154,700 00

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CALHOUN COUNTY.—Continued.

MINES WORKED.							
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in pounds, produced the past year.	Aggregate valuation at place of Mining of Minerals produced the past year	No. of Persons employed.	Amount of Capital invested		Value of all Merchandize imported the preceding year for the purpose of sale.
							$1,012 99
1	Iron.	1,310,000	$327 50	*	*		470,000 00
							51,600 00
							146 60
1		1,310,000	$327 00				$522,759 59

* Not stated.

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CASS COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Calvin,	32	45	57	68	33	2	..	..	77	25
Howard,	68	76	90	107	48	1	..	..	141	22
Jefferson,	65	69	117	118	49	2	..	..	157	287
La Grange,	111	92	157	235	77	8	..	..	226	76
Mason,	57	49	75	79	34	4	..	..	114	31
Marcellus,	26	34	49	41	11	..	..	..	39	5
Milton,	43	63	99	81	41	..	..	..	94	24
Newburg,	30	43	49	69	24	2	..	..	73	22
Ontwa,	44	52	77	119	45	..	..	..	139	26
Penn,	73	59	75	126	43	1	..	..	124	46
Porter,	115	130	194	202	90	2	..	..	230	*
Pokagon,	172	166	240	372	136	6	..	..	306	100
Silver Creek,	69	71	127	161	59	2	..	..	173	51
Volinia,	43	45	75	95	45	1	..	..	120	197
Wayne,	50	65	109	100	39	3	..	..	112	29
Total,	998	1,059	1,590	1,973	774	34	..	..	2,125	941

CHIPPEWA COUNTY.

S. Ste Marie,	117	109	128	810	136	5	1	..	327	812

*Not stated.

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CASS COUNTY—CONTINUED.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy five and over.	Married.	Unmarried.
Calvin,	40	34	55	66	30	2	77	24
Howard,	65	54	74	120	58		149	20
Jefferson,	42	59	78	124	61	8	132	203
La Grange,	98	84	147	210	74	3	232	44
Mason,	43	49	54	92	45	1	111	24
Marcellus,	12	8	22	42	9		44	24
Milton,	45	50	65	76	42	3	102	14
Newburg,	29	31	35	68	30		74	23
Ontwa,	40	47	76	126	51	4	135	48
Penn,	56	66	66	125	47	3	125	46
Porter,	122	111	159	202	100		230	*
Pokagon,	156	152	206	342	140	16	312	70
Silver Creek,	75	70	108	159	56	4	171	43
Volinia,	40	38	88	106	46	7	122	179
Wayne,	47	61	76	105	46	1	116	37
Total,	910	914	1,309	1,963	835	52	2,132	799

CHIPPEWA COUNTY.—CONTINUED.

S. Ste. Marie,	90	82	92	250	63		218	222

*Not stated.

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CASS COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
..	..	..	377	3	10	237	227	..	..	..	377	841
..	1	2	75	3	3	390	371	..	1	2	75	839
..	..	1	1	15	16	420	372	..	..	1	1	794
..	..	..	8	10	13	680	616	..	..	..	8	1,304
..	..	..	....	10	2	298	284	..	..	..	....	582
..	2	..	....	2	5	161	93	..	2	..	....	256
..	..	1	....	7	13	327	281	..	..	1	....	609
..	1	..	6	2	3	217	193	..	1	..	6	417
..	1	..	2	2	9	337	344	..	1	..	2	684
..	1	..	47	6	6	377	363	..	1	..	47	788
..	1	..	152	16	10	733	694	..	1	..	152	1,580
2	..	2	8	20	16	1,092	1,012	2	..	2	8	2,116
1	..	..	5	17	17	489	472	1	..	..	5	967
..	1	..	11	13	7	304	325	..	1	..	11	641
1	1	2	....	15	9	366	336	1	1	2	....	706
4	9	8	692	141	139	6,428	5,983	4	9	8	692	13,124

CHIPPEWA COUNTY.—Continued.

1	..	2	26	3	19	1,356	577	1	..	2	26	1,962

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CASS COUNTY.—Continued.

TOWNSHIPS.	LAND. Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year
Calvin,	11,653	.....	3,129	860	1,187	34,985
Howard,	13,827	.....	4,013	1,150	1,590	39,612
Jefferson,	18,648	.....	6,080	4,564	2,760	46,127
La Grange,	18,246	.....	6,469	1,501	2,030	59,360
Mason,	8,993	.....	2,001	1,027	1,003	26,775
Marcellus,	4,969	.....	951	252	221	7,598
Milton,	12,138	.....	6,310	1,573	2,335	67,700
Newburg,	17,551	.....	2,302	611	493	13,150
Ontwa,	10,652	.....	6,312	1,233	1,752	56,735
Penn,	20,601	.....	5,523	900	1,600	70,497
Porter,	30,815	.....	5,620	1,627	1,615	34,655
Pokagon,	17,476	.....	6,505	1,544	1,852	20,712
Silver Creek,	15,944	.....	3,110	779	824	25,670
Volinia,	11,775	.....	3,879	1,005	1,220	38,828
Wayne,	13,642	129	5,756	1,362	1,376	34,035
Total,	226,930	129	67,960	19,988	21,858	576,439

CHIPPEWA COUNTY.—Continued.

S. Ste. Marie,	3,465	.....	369	.....	.....	.....

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CASS COUNTY.—CONTINUED.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year	No. of Bushels of all other kinds of Grain raised the preceding year	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year
798	11,687	1,174	4,578	542	2,216	10,445
1,228	10,906	4,450	8,975	1,256	12,247	46,662
2,438	17,238	6,041	9,522	901	4,593	220,926
1,210	17,159	18,318	5,500	635	4,595	173,205
791	11,956	5,352	5,229	6,102	2,881	35,044
226	2,808	256	3,051	515	623	30,200
1,465	23,481	12,685	8,610	342	2,435	71,762
568	6,247	967	3,119	427	2,263	27,527
1,064	18,749	7,023	10,427	309	3,516	67,408
868	15,139	200,111	3,904	951	13,892	167,255
1,495	21,115	3,440	8,625	785	7,005	55,320
1,464	19,099	16,608	6,747	895	4,923	92,732
598	6,744	3,801	4,814	457	2,236	48,411
973	12,914	13,973	5,700	247	3,906	51,961
1,221	13,780	9,238	8,187	648	4,410	57,695
16,407	209,022	303,437	96,988	15,012	71,741	1,161,553

CHIPPEWA COUNTY.—CONTINUED.

.....	.....	1,233	2,203	317	.....	6,690

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CASS COUNTY.—CONTINUED.

TOWNSHIPS	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the present year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Calvin,	7,186	75	12,626	210	328	100
Howard,	21,783	260	----------	259	240	74
Jefferson,	4,822	430	990	377	499	42
La Grange,	17,925	1,485	2,345	340	408	107
Mason,	15,750	2,230	3,365	157	248	85
Marcellus,	5,200	------	800	30	121	53
Milton,	10,258	985	----------	262	342	22
Newburg,	4,480	50	2,020	81	95	78
Ontwa,	9,900	4,497	60	226	248	45
Penn,	12,630	839	9,282	270	291	32
Porter,	19,760	8,020	1,630	202	86	108
Pokagon,	23,834	1,065	2,980	312	389	110
Silver Creek,	7,592	344	5,933	151	225	112
Volinia,	7,936	1,100	3,322	209	257	68
Wayne,	16,454	410	2,351	183	202	79
Total,	185,510	21,790	47,704	3,269	3,979	1,115

CHIPPEWA COUNTY.—CONTINUED.

S. Ste. Marie,	100	------	3,700	54	6	42

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CASS COUNTY.—Continued.

STOCK.				FLOURING MILLS.						
							Power Used.			
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Steam.	Water.	No. of Persons employed.	Amount of Capital invested
221	826	1,220	2	1	1	50	....	1	1	$1,500 00
297	1,333	970	..	..	..	.....	.....	...	...	.....
302	2,608	1,533	..	..	..	.....	.....	...	...	.....
342	1,909	1,061	..	1	*	3,500	....	1	2	3,000 00
235	1,048	645	..	..	..	.....	.....	...	...	.....
98	264	299	..	..	..	.....	.....	...	...	.....
288	891	134	..	..	..	.....	.....	...	...	.....
133	816	530	..	..	..	.....	.....	...	...	.....
219	1,247	573	..	1	3	1,500	....	1	3	2,000 00
284	4,993	1,618	..	1	2	500	....	1	2	5,000 00
460	2,518	840	..	..	..	.....	.....	...	...	.....
362	2,163	1,295	..	1	2	250	....	1	2	2,000 00
227	783	1,271	..	..	..	.....	.....	...	...	.....
230	1,538	894	2	1	*	1,560	....	1	1	2,000 00
255	1,525	780	..	..	..	.....	.....	...	...	.....
3,953	24,462	13,663	4	6	8	7,360	....	6	11	$15,500 00

CHIPPEWA COUNTY.—Continued.

57	20	50	..	..	..	.....	.....	...	...	.....

*Not stated.

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CASS COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Calvin,	$480 00	--	----------	----	---	------
Howard,	----------	2	260,000	----	2	3
Jefferson,	----------	3	200,000	----	3	7
La Grange,	17,500 00	3	960,000	2	1	9
Mason,	----------	1	20,000	----	1	1
Marcellus,	----------	--	----------	----	---	------
Milton,	----------	1	120,000	----	1	1
Newburg,	----------	--	----------	----	---	------
Ontwa,	500 00	1	250,000	----	1	1
Penn,	2,000 00	--	----------	----	---	------
Porter,	----------	4	380,000	----	4	*
Pokagon,	300 00	3	374,000	----	3	4
Silver Creek,	----------	4	913,000	1	3	14
Volinia,	*	3	850,000	*	*	3
Wayne,	----------	--	----------	----	---	------
Total,	$20,780 00	25	4,327,000	3	19	43

CHIPPEWA COUNTY.—Continued.

S. Ste. Marie,	----------	1	500,000	----	1	10

*Not stated.

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CASS COUNTY.—Continued.

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of Barrels of Oil made the preceding year.	No. of Barrels of Peppermint Oil manufactured the preceding year.	No. of—	No. of Barrels of Beer made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.
$15,000 00	*							
10,000 00	*							
7,500 00	$6,600 00							
*	500 00							
500 00	400 00							
700 00	300 00							
4,000 00	1,520 00						1	1,200
4,000 00	1,550 00							
2,800 00	6,524 00							
*	2,000 00							
$44,500 00	$19,394 00						1	1,200

CHIPPEWA COUNTY.—Continued.

$4,000 00	*							

*Not stated.

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CASS COUNTY.—Continued.

TOWNSHIPS.	DISTILLERIES.		FISH.	AGGREGATE OF ALL KINDS OF MANUFACTORIES.		
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Calvin,						
Howard,						
Jefferson,				$1,500 00	2	$500 00
La Grange,		48				
Mason,						
Marcellus,						
Milton,						
Newburg,						
Ontwa,		13				
Penn,						
Porter,						
Pokagon,		96		1,500 00	3	1,500 00
Silver Creek,						
Volinia,						
Wayne,						
Total,		157		$3,000 00	5	$2,000 00

CHIPPEWA COUNTY.—Continued.

S. Ste. Marie,						

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CASS COUNTY.—CONTINUED.

MINES WORKED.						
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in pounds, produced the past year.	Aggregate valuation at place of mining of minerals produced the past year.	No of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
						$68,100 00
						18,400 00
						126,200 00
						$212,700 00

CHIPPEWA COUNTY.—CONTINUED.

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CLINTON COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over Seventy-five and under Ninety.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Bath,	34	28	25	52	13	2	..	..	58	88
Bengal,	23	37	37	53	20	...	..	..	67	5
Bingham,	34	28	35	57	15	3	..	..	67	9
Dallas,	61	49	51	74	23	3	..	..	88	173
De Witt,	84	65	123	144	53	2	..	..	161	40
Duplain,	46	35	78	91	39	2	..	..	106	185
Eagle,	52	54	80	110	41	1	..	..	117	35
Essex,	94	72	111	153	37	...	..	..	162	28
Greenbush,	41	41	70	88	34	1	..	..	105	170
Lebanon,	40	38	48	61	22	...	..	..	67	142
North Shade,	10	8	10	30	7	...	..	..	28	8
Olive,	30	38	28	60	25	1	..	..	70	16
Ovid,	37	21	30	40	18	...	..	..	52	4
Riley,	35	38	49	72	21	...	..	..	76	17
Victor,	30	36	62	48	53	...	..	..	65	7
Watertown,	39	35	53	77	25	...	1	..	80	20
Westphalia,	91	70	94	96	58	3	..	..	127	29
Total,	781	688	984	1,306	504	18	1	..	1,496	976

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CLINTON COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Bath,	19	20	28	48	19		59	75
Bengal,	42	23	43	50	22		67	4
Bingham,	36	29	21	60	18		67	11
Dallas,	45	34	41	65	29	1	89	126
De Witt,	73	59	73	144	62	2	168	38
Duplain,	49	38	46	94	39		105	161
Eagle,	50	43	52	117	52	2	119	53
Essex,	74	54	56	140	42		163	19
Greenbush,	47	35	35	84	37	2	107	133
Lebanon,	40	30	32	54	24		69	111
North Shade,	8	9	5	24	5		27	
Olive,	27	15	11	61	20		72	10
Ovid,	28	21	28	40	12	1	52	
Riley,	31	30	38	59	26		80	6
Victor,	28	23	52	38	33		67	12
Watertown,	27	34	47	80	23	1	88	15
Westphalia,	92	72	73	84	66	2	130	22
Total,	716	569	681	1,242	529	11	1,529	796

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CLINTON COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
--	--	--	--	5	2	149	134	--	--	--	----	283
--	--	--	--	----	---	170	180	--	--	--	----	350
--	--	--	--	3	1	172	164	--	--	--	----	336
--	--	--	--	----	---	261	215	--	--	--	----	476
--	--	--	1	4	15	471	413	--	--	--	1	885
--	--	2	--	3	3	291	266	--	--	2	----	559
1	1	1	--	3	4	338	316	1	1	1	----	657
--	--	--	--	7	1	467	366	--	--	--	----	833
--	--	1	2	----	2	275	240	--	--	1	2	518
--	--	--	--	6	---	209	180	--	--	--	----	389
--	--	--	--	2	1	65	51	--	--	--	----	116
--	--	--	--	1	1	182	134	--	--	--	----	316
--	--	--	--	----	1	146	130	--	--	--	----	276
--	--	--	1	4	2	215	184	--	--	--	1	400
--	--	--	--	4	1	229	174	--	--	--	----	403
--	--	--	--	1	3	230	212	--	--	--	----	442
1	--	1	--	7	11	412	389	1	--	1	----	803
2	1	5	4	50	48	4,282	3,748	2	1	5	4	8,042

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CLINTON COUNTY.—Continued.

TOWNSHIPS.	LAND					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised preceding year
Bath,	28,500	40	1,390	516	201	3,005
Bengal,	6,952		566	226	189	5,406
Bingham,	5,060		821	203	129	3,360
Dallas,	39,175		1,103	419	146	3,665
De Witt,	11,969		3,845	1,190	509	18,304
Duplain,	9,218	160	1,766	360	288	6,813
Eagle,	31,705		2,666	754	432	12,307
Essex,	15,497		3,053	772	638	20,470
Greenbush,	8,248		1,361	336	309	8,940
Lebanon,	7,718		1,459	478	187	6,321
North Shade,	2,628	160	102	40	34	660
Olive,	5,905		1,523	299	203	3,111
Ovid,	33,169		1,333	335	226	4,879
Riley,	18,763		1,179	342	267	6,218
Victor,	7,575		1,566	520	173	3,173
Watertown,	6,914	80	1,671	417	241	6,025
Westphalia,	26,623		3,466	1,079	324	6,029
Total,	200,960	440	28,870	8,286	4,496	118,686

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CLINTON COUNTY.—CONTINUED.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
399	5,210	1,459	2,033	691	969	317
182	2,797	1,730	1,966	176	41	11,746
118	1,785	1,003	1,781	196	126	2,065
376	5,371	1,619	1,859	361	314	6,860
1,118	15,740	6,232	5,932	1,068	3,083	6,996
281	4,099	1,918	2,709	301	515	5,537
599	9,003	6,855	5,104	704	2,194	6,798
587	9,505	4,568	10,171	353	1,339	18,946
327	3,356	1,244	3,925	363	236	8,568
313	4,513	2,054	2,926	230	899	3,988
30	802	437	533	17	------	2,841
234	2,971	1,954	1,145	448	517	3,240
204	4,240	2,023	1,385	348	399	6,569
208	3,563	2,258	1,947	329	203	4,697
342	4,816	2,643	2,749	707	1,103	5,740
356	5,828	3,415	2,204	257	1,025	6,925
1,063	15,139	3,511	5,422	448	1,133	8,766
6,736	98,738	44,923	53,791	6,997	14,096	110,599

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CLINTON COUNTY.—Continued.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Bath,	9,440	727	240	38	125	86
Bengal,	8,485	122	6,582	33	149	75
Bingham,	5,750	700	7,552	25	116	71
Dallas,	6,495	430	4,280	36	160	110
De Witt,	14,170	745	2,225	136	264	136
Duplain,	10,190	130	11,206	109	204	153
Eagle,	13,719	871	14,726	100	250	128
Essex,	13,385	.....	14,923	99	256	192
Greenbush,	6,670	50	7,481	70	204	72
Lebanon,	11,255	300	7,092	46	110	94
North Shade,	1,510	.....	5,619	.....	27	28
Olive,	6,055	325	6,864	50	140	78
Ovid,	4,920	919	6,472	45	121	57
Riley,	9,950	.....	12,102	39	138	72
Victor,	11,500	560	2,378	41	180	107
Watertown,	12,625	904	7,298	55	165	97
Westphalia,	11,558	.....	8,147	47	311	219
Total,	157,677	6,783	125,185	969	2,920	1,775

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CLINTON COUNTY.—Continued.

STOCK.				FLOURING MILLS.						
							Power Used.			
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Steam.	Water.	No. of Persons employed.	Amount of Capital invested.
120	464	181	--	--	--	-------	----	----	--	----------
130	26	293	--	--	--	-------	----	----	--	----------
116	83	213	--	--	--	-------	----	----	--	----------
151	107	330	--	--	--	-------	----	----	--	----------
271	1,151	409	--	1	2	1,500	----	2	--	$7,000 00
182	191	271	--	--	--	-------	----	----	--	----------
249	894	379	--	--	--	-------	----	----	--	----------
278	568	562	--	--	--	-------	----	----	--	----------
154	89	356	--	--	--	-------	----	----	--	----------
120	204	222	--	--	--	-------	----	----	--	----------
35	4	59	--	--	--	-------	----	----	--	----------
129	219	196	--	--	--	-------	----	----	--	----------
111	92	235	--	--	--	-------	----	----	--	----------
111	109	175	--	--	--	-------	----	----	--	----------
175	340	274	--	--	--	-------	----	----	--	----------
150	412	305	--	--	--	-------	----	----	--	----------
246	415	481	--	--	--	-------	----	----	--	----------
2,728	5,368	4,941	--	1	2	1,500	----	2	--	$7,000 00

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CLINTON COUNTY.—CONTINUED.

TOWNSHIPS.	SAW					
	Value of Products for the past year.	No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Bath,						
Bengal,						
Bingham,						
Dallas,						
De Witt,	$1,200 00	1	150,000		1	2
Duplain,		2	800,000		2	7
Eagle,		1	150,000		1	1
Essex,		3	352,000		3	11
Greenbush,						
Lebanon,						
North Shade,						
Olive,						
Ovid,						
Riley,						
Victor,						
Watertown,		1	120,000		1	2
Westphalia,						
Total,	$1,200 00	8	1,572,000		8	23

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CLINTON COUNTY.—CONTINUED.

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of Barrels of Oil made the preceding year	No. of Barrels of Peppermint Oil manufactured the preceding year	No. of—	No. of Barrels of Beer Made the preceding year	No. of—	No. of Gallons of Liquor made the preceding year
$1,200 00	$300 00							
5,000 00	4,700 00							
1,900 00	300 00							
6,700 00	*							
1,000 00	8,400 00							
$15,800 00	$13,700 00							

* Not stated.

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CLINTON COUNTY.—Continued.

TOWNSHIPS.	Distilleries.		FISH.	Aggregate of all kinds of Manufactories.		
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Bath,						
Bengal,						
Bingham,						
Dallas,						
De Witt,						
Duplain,						
Eagle,						
Essex,						
Greenbush,						
Lebanon,						
North Shade,						
Olive,						
Ovid,						
Riley,						
Victor,						
Watertown,						
Westphalia,						
Total,						

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CLINTON COUNTY.—CONTINUED.

MINES WORKED.						
No. of—	Kind of Mineral	Aggregate quantity of Mineral, in Pounds, produced the past year	Aggregate valuation at place of mining of minerals produced the past year	No. of Persons employed	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...

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EATON COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Bellevue,	89	97	159	183	67	5	..	..	214	41
Benton,	38	50	69	79	25	1	..	..	95	20
Brookfield,	51	35	54	85	28	..	..	..	78	23
Carmel,	78	73	125	118	68	3	..	..	29	19
Chester,	38	51	68	65	28	1	..	..	86	165
Delta,	45	32	43	65	20	4	..	..	78	11
Eaton,	89	91	95	151	65	3	..	..	179	40
Eat'n Rapids,	178	194	257	361	132	6	..	..	282	79
Kalamo,	54	48	85	126	50	..	..	..	127	49
Oneida,	80	91	107	145	55	1	..	..	166	28
Roxand,	55	41	50	85	29	..	..	..	104	5
Sunfield,	15	13	28	45	8	..	..	..	47	6
Vermontv'le,	33	23	51	86	17	3	..	..	91	25
Walton,	56	63	100	135	45	..	..	..	91	46
Windsor,	36	38	55	75	24	1	..	..	64	11
Total,	935	940	1,346	1,804	661	28	..	..	1,731	568

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EATON COUNTY.—CONTINUED.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Bellevue,	84	70	107	164	77	2	211	32
Benton,	51	33	47	84	39	----	98	16
Brookfield,	41	35	42	67	24	1	*	*
Carmel,	49	68	90	129	60	1	29	22
Chester,	43	46	58	72	26	1	87	159
Delta,	22	26	33	57	19	----	73	2
Eaton,	75	65	96	164	97	1	180	47
Eat'n Rapids,	172	137	216	349	142	6	283	66
Kalamo,	54	56	66	106	53	1	131	29
Oneida,	75	77	102	142	58	----	168	30
Roxand,	49	51	50	83	34	2	98	9
Sunfield,	20	17	27	41	10	----	46	------
Vermontv'le,	40	32	53	67	37	2	91	10
Walton,	48	41	79	121	51	1	91	35
Windsor,	43	30	24	72	23	----	66	6
Total,	866	784	1,090	1,718	750	18	1,652	463

* Not stated.

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EATON COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
--	--	1	--	2	1 10	600	504	--	--	1	----	1,105
--	--	--	--	---	7	262	254	--	--	--	----	516
1	--	--	--	1	10	253	210	1	--	--	----	464
--	1	--	--	---	2	465	397	--	1	--	----	863
--	2	--	--	---	---	251	246	--	2	--	----	499
--	--	--	--	---	---	209	157	--	--	--	----	366
--	--	--	--	6	5	494	498	--	--	--	----	992
1	3	2	3	44	33	1,128	1,022	1	3	2	3	2,159
--	1	3	--	9	7	363	336	--	1	3	----	703
1	--	1	2	30	11	479	454	1	--	1	2	937
1	1	--	--	7	2	260	269	1	1	--	----	531
--	--	--	--	---	---	109	115	--	--	--	----	224
--	--	1	--	6	5	213	231	--	--	1	----	445
--	--	--	--	5	11	399	341	--	--	--	----	740
--	--	--	--	3	2	229	192	--	--	--	----	421
4	8	8	5	132	105	5,714	5,226	4	8	8	5	10,965

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EATON COUNTY.—Continued.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year
Bellevue,	8,546	60	3,488	1,160	503	7,199
Benton,	21,508	....	1,780	492	277	5,693
Brookfield,	6,107	....	1,263	399	169	2,955
Carmel,	18,536	3	3,066	672	504	11,013
Chester,	20,854	....	1,661	324	228	6,284
Delta,	5,620	....	944	212	127	2,814
Eaton,	18,465	....	3,556	1,048	479	11,082
Eat'n Rapids,	41,069	....	8,580	2,639	925	15,562
Kalamo,	21,777	....	2,155	631	389	9,077
Oneida,	21,607	1	2,638	685	408	9,306
Roxand,	9,536	....	1,519	406	226	6,699
Sunfield,	20,962	....	592	152	81	2,030
Vermontv'le,	21,424	7	2,217	399	229	5,414
Walton,	10,507	....	2,040	690	325	4,850
Windsor,	20,251	2	1,754	436	290	6,973
Total,	266,769	73	37,253	10,345	5,160	106,951

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EATON COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
977	11,168	3,390	3,382	1,556	3,480	12,717
348	6,017	1,392	2,002	324	1,135	8,986
1,760	4,058	671	1,507	303	462	2,612
563	7,140	1,829	2,828	634	1,582	12,950
172	3,205	2,948	1,864	610	1,272	9,095
125	1,847	1,082	1,039	253	637	5,142
814	10,588	1,726	3,464	380	2,078	7,773
2,169	33,088	6,502	9,601	1,946	6,564	19,316
445	5,672	1,600	1,925	457	1,385	10,661
519	7,726	5,089	2,922	594	1,630	19,230
283	4,807	3,078	2,127	594	960	3,380
95	1,865	1,524	556	198	586	3,290
301	4,591	3,058	1,923	791	1,358	48,850
676	5,668	2,717	2,326	508	1,813	7,400
349	5,488	912	3,016	381	768	5,728
9,596	112,928	37,518	40,482	9,529	25,710	177,130

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EATON COUNTY.—Continued.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, 1 year old and over.	No. of Work Oxen.
Bellevue,	21,908	3,321	16,099	134	278	186
Benton,	12,880	971	15,988	74	183	99
Brookfield,	1,517	700	7,958	39	92	73
Carmel,	15,760	610	13,946	117	250	156
Chester,	13,420	2,272	18,517	75	155	82
Delta,	5,985	1,160	6,636	39	77	63
Eaton,	13,100	375	15,265	155	200	140
Eat'n Rapids,	32,970	2,770	8,415	303	504	376
Kalamo,	12,658	920	19,447	64	225	118
Oneida,	14,840	665	27,745	108	174	138
Roxand,	16,478	2,490	21,510	36	153	97
Sunfield,	4,755	620	10,375	34	66	52
Vermontv'le,	14,953	770	15,550	116	385	90
Walton,	13,004	1,690	7,365	98	145	106
Windsor,	10,790	581	8,379	65	134	80
Total,	205,018	19,915	213,195	1,457	3,021	1,856

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EATON COUNTY.—CONTINUED.

STOCK.				FLOURING MILLS.						
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested
320	1,195	575	--	1	3	2,000	----	1	10	$10,000 00
182	435	300	--	--	--	-------	----	---	---	----------
114	194	190	--	--	--	-------	----	---	---	----------
278	704	539	--	--	--	-------	----	---	---	----------
181	403	264	--	--	--	-------	----	---	---	----------
108	199	162	--	--	--	-------	----	---	---	----------
260	744	423	--	--	--	-------	----	---	---	----------
662	2,775	1,033	--	2	6	2,300	----	2	5	15,000 00
200	539	525	--	--	--	-------	----	---	---	----------
292	442	417	--	1	1	3,000	----	1	2	4,000
181	408	310	--	--	--	-------	----	---	---	----------
86	187	126	--	--	--	-------	----	---	---	----------
249	473	269	--	--	--	-------	----	---	---	----------
217	506	301	--	1	2	1,000	----	1	1	2,500 00
142	374	261	--	--	--	-------	----	---	---	----------
3,472	9,578	5,695	--	5	12	8,300	----	5	18	$31,500 00

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EATON COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Bellevue,	$2,000 00	2	504,000		2	5
Benton,						
Brookfield,						
Carmel,		1	300,000	1		4
Chester,						
Delta,		1	125,000		1	2
Eaton,						
Eat'n Rapids,	2,300 00	5	1,750,000		5	10
Kalamo,		4	1,195,000	1	3	8
Oneida,	1,500	1	300,000		1	
Roxand,						
Sunfield,						
Vermontv'le,						
Walton,	6,000 00	3	700,000		3	7
Windsor,		1			1	3
Total,	$11,800 00	18	4,874,000	2	16	39

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EATON COUNTY.—Continued.

MILLS.		OIL MILLS			BREWERIES			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of barrels of Oil made the preceding year	No. of Barrels of Pepper mint Oil manufactured the preceding year	No. of—	No. of Barrels of Beer made the preceding year	No. of—	No. of Gallons of Liquor made the preceding year.
$1,500 00	$3,100 00							
2,000 00	900 00							
2,000 00	250 00							
7,300 00	4,800 00							
4,700 00	2,900 00							
1,000 00	900 00							
5,000 00	2,900 00							
1,000 00	750 00							
$24,500 00	$16,500 00							

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EATON COUNTY.—CONTINUED.

TOWNSHIPS.	DISTILLERIES.		FISH.	AGGREGATE OF ALL KINDS OF MANUFACTORIES.		
	No. Gallons of Wine made the preceding year	No. of Barrels of Cider made the preceding year	No. of Barrels caught the preceding year	Amount of Capital invested	No. of Persons employed	Value of Products for the past year
Bellevue,				$4,600 00	20	$18,200 00
Benton,						
Brookfield,						
Carmel,				450 00	4	1,800 00
Chester,						
Delta,						
Eaton,						
Eat'n Rapids,				5,100 00	8	1,900 00
Kalamo,				750 00	4	1,050 00
Oneida,						
Roxand,						
Sunfield,						
Vermontv'le,						
Walton,						
Windsor,						
Total,				$10,900 00	36	$22,950 00

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EATON COUNTY.—CONTINUED.

MINES WORKED.							
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in pounds, produced the past year.	Aggregate valuation at place of Mining of Minerals produced the past year	No. of Persons employed.	Amount of Capital invested		Value of all Merchandize imported the preceding year for the purpose of sale.
							$35,230 00
							5,000 00
							$40,230 00

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GENESEE COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Argentine,	54	72	88	133	33	3	..	..	111	67
Atlas,	106	109	166	230	79	2	1	..	232	460
Clayton,	42	42	84	77	41	3	1	..	102	25
Davison,	57	47	86	121	31	2	..	..	123	181
Fenton,	102	79	159	327	87	7	..	..	241	470
Forest,	28	20	25	57	18	1	..	..	58	17
Flint,	320	299	511	753	233	8	1	..	715	223
Flushing,	91	78	117	145	63	3	..	..	179	31
Gaines,	35	30	61	70	28	1	..	..	52	18
Genesee,	101	103	186	214	77	5	..	..	246	52
Grand Blanc,	73	73	176	172	78	7	..	..	211	368
Montrose,	10	6	15	30	6	1	1	..	23	48
Mundy,	59	71	142	175	74	1	..	..	127	50
Richfield,	55	58	66	109	40	2	..	..	133	17
Thetford,	52	43	48	78	22	..	..	..	80	21
Vienna,	57	38	86	117	37	..	1	..	116	42
Total,	1,242	1,168	2,018	2,808	947	46	5	..	2,749	2,090

GRAND TRAVERSE COUNTY.

Antrim,	13	11	16	37	7	..	..	..	29	16
*Leelanaw,	-----	-----	-----	-----	----	..	..	..	-----	-----
Manistee,	27	14	22	171	13	..	..	..	65	117
Peninsula,	19	20	29	39	14	..	..	..	41	15
Traverse,	5	8	8	86	8	..	..	..	24	83
Total,	64	53	75	333	42	..	..	..	159	231

*Not reported.

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GENESEE COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Sev. enty-five.	Seventy five and over.	Married.	Unmarried.
Argentine,	61	53	57	103	32	3	108	23
Atlas,	110	85	129	210	89	3	239	388
Clayton,	41	45	62	73	41	1	102	5
Davison,	57	35	55	118	39	----	116	178
Fenton,	134	127	127	127	82	3	245	411
Forest,	27	22	15	43	21	----	58	4
Flint,	310	266	390	761	255	8	730	253
Flushing,	84	80	99	153	69	2	183	26
Gaines,	35	36	29	65	24	----	57	10
Genesee,	111	99	121	221	94	7	246	74
Grand Blanc,	70	66	108	186	83	5	211	307
Montrose,	12	11	6	15	6	2	23	37
Mundy,	70	85	105	151	81	1	126	30
Richfield,	52	59	51	108	45	2	131	8
Thetford,	36	39	32	65	18	----	79	3
Vienna,	45	46	49	104	31	1	117	19
Total,	1,255	1,154	1,435	2,503	1,010	38	2,771	1,776

GRAND TRAVERSE COUNTY.—Continued.

Antrim,	9	13	13	23	7	----	27	3
*Leelanaw,	-----	-----	-----	-----	-----	----	------	------
Manistee,	34	13	18	60	12	----	56	8
Peninsula,	12	14	13	29	18	----	41	------
Traverse,	5	8	9	19	4	----	21	24
Total,	60	48	53	131	41	----	145	35

*Not reported.

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GENESEE COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
..	..	..	..	2	1	383	309	..	..	..	....	692
..	..	..	..	15	5	695	626	..	..	..	....	1,321
..	..	..	..	..	2	290	263	..	..	..	....	553
..	..	..	..	7	3	344	304	..	..	..	....	648
..	..	..	..	14	6	761	600	..	..	..	....	1,361
..	..	1	..	..	2	149	128	..	..	1	....	278
1	11	1	18	24	37	2,125	1,990	1	11	1	18	4,146
..	..	..	..	7	5	497	487	..	..	..	....	984
..	..	1	..	4	12	225	189	..	..	1	....	415
..	..	..	..	11	13	686	653	..	..	..	....	1,339
..	..	..	..	8	6	579	518	..	..	..	....	1,097
..	..	1	7	2	1	69	52	..	..	1	7	129
..	..	2	..	14	16	522	493	..	..	2	....	1,017
1	..	..	..	7	8	330	317	1	..	..	....	648
..	..	2	..	3	7	243	190	..	..	2	....	435
..	1	..	..	6	4	336	276	..	1	..	....	613
2	12	8	25	124	128	8,234	7,395	2	12	8	25	15,676

GRAND TRAVERSE COUNTY.—Continued.

..	..	..	..	..	4	84	65	..	..	..	....	149
..	..	..	..	..	..	....	....	..	..	..	....	....
..	..	..	10	7	8	247	137	..	..	..	10	394
..	1	..	..	..	..	121	86	..	1	..	....	208
..	..	..	..	2	8	115	45	..	..	..	....	160
..	1	..	10	9	20	567	333	..	1	..	10	911

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GENESEE COUNTY.—Continued.

TOWNSHIPS.	LAND. Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year.
Argentine,	20,983	120	3,589	943	389	7,249
Atlas,	18,235	....	6,680	1,866	772	10,798
*Clayton,	.....	....	.....	.....	.....	.....
Davison,	12,496	1	1,484	513	193	3,866
Fenton,	9,849	....	3,043	1,023	567	7,988
Forest,	9,517	....	598	184	147	1,777
Flint,	27,955	113	9,095	2,327	1,224	21,851
Flushing,	15,105	....	3,438	721	493	6,362
Gaines,	7,590	....	1,581	515	190	2,715
Genesee,	33,611	4	6,637	1,708	751	10,987
Grand Blanc,	15,217	....	5,888	1,630	917	18,300
†Montrose,	†	†	210	†	†	492
Mundy,	23,040	....	5,124	1,393	686	13,715
Richfield,	22,992	10	3,452	671	326	2,667
Thetford,	7,460	....	1,679	496	260	2,526
Vienna,	7,719	160	1,560	288	178	2,679
Total,	232,069	408	54,059	14,278	7,093	113,972

GRAND TRAVERSE COUNTY.—Continued.

Antrim,	19,555	....	.....	.....	.....	.....
*Leelanaw,	.....	....	.....	.....	.....	.....
Manistee,	24,096	....	71	.....	13	250
Peninsula,	‡	....	.....	.....	.....	.....
Traverse,	15,559	....	40	.....	.....	.....
Total,	59,209	....	111	.....	13	250

*Not reported.
‡Not stated.
†Indian reserve.

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GENESEE COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year	No. of Bushels of all other kinds of Grain raised the preceding year	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork mar. keted the preceding year
820	10,377	2,547	4,701	1,184	3,098	10,912
1,493	23,469	5,220	6,079	2,015	12,529	23,424
.....	.....	.....	.....	.....	.....	.....
377	6,334	2,371	2,562	725	3,908	6,010
698	9,652	2,799	5,326	1,319	4,700	6,566
90	1,917	613	1,003	203	222	350
1,515	24,070	19,463	9,475	3,310	18,282	66,187
493	8,063	4,617	3,106	739	2,937	11,870
240	4,669	1,119	1,761	509	990	5,610
1,155	19,134	1,353	4,416	2,268	7,504	44,750
1,246	24,391	12,295	9,832	3,037	24,912	16,770
†	325	†	490	121	434	900
1,003	16,597	117,80	4,239	1,855	7,527	1 ,144
470	6,886	3,610	1,948	788	1,891	7,585
401	5,425	3,869	1,194	531	935	4,239
177	2,797	2,471	2,059	514	828	6,630
10,178	164,106	74,127	58,191	19,118	90,497	226,947

GRAND TRAVERSE COUNTY.—Continued.

.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	100	1,670	43	.....	.....
12	.....	200	.....	.....	.....	.....
.....	.....	.....	150	.....	.....	.....
12	.....	300	1,820	43	.....	.....

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GENESEE COUNTY.—Continued.

TOWNSHIPS	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the present year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Argentine,	14,615	270	----------	111	308	131
Atlas,	27,775	1,368	1,019	297	339	250
*Clayton,	----------	------	----------	------	------	------
Davison,	14,150	415	7,214	85	184	144
Fenton,	31,290	950	----------	138	217	149
Forest,	3,010	160	1,853	31	30	45
Flint,	51,135	6,310	10,501	507	592	380
Flushing,	14,620	3,430	10,200	122	313	156
Gaines,	13,405	200	6,214	82	228	98
Genesee,	30,065	1,140	4,812	252	423	260
Grand Blanc,	32,215	10,150	1,680	274	400	230
Montrose,	500	------	400	24	41	22
Mundy,	26,585	805	3,299	233	475	235
Richfield,	15,646	390	5,899	104	180	121
Thetford,	8,153	788	3,880	55	117	78
Vienna,	7,040	11,450	975	36	135	82
Total,	290,204	37,826	57,946	2,401	3,982	2,381

GRAND TRAVERSE COUNTY.—Continued.

Antrim,	----------	------	----------	------	6	14
*Leelanaw,	----------	------	----------	------	------	------
Manistee,	----------	------	----------	22	4	53
Peninsula,	----------	------	100	14	3	14
Traverse,	----------	------	----------	6	1	54
Total,	----------	------	100	42	14	135

*Not reported.

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GENESEE COUNTY.—Continued.

STOCK.				FLOURING MILLS.						
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested
244	1,357	362	1	1	2	4,000	----	1	2	$8,000 00
443	4,752	579	--	2	5	5,256	----	2	5	17,000 00
-----	------	------	--	--	--	-------	----	----	--	----------
226	1,420	306	--	--	--	-------	----	----	--	----------
319	1,917	375	--	2	4	4,600	----	2	4	11,500 00
76	51	121	--	--	--	-------	----	----	--	----------
881	6,675	1,385	--	2	6	14,000	----	2	5	15,000 00
285	1,024	247	--	1	2	2,000	----	1	2	4,000 00
185	455	311	--	--	--	-------	----	----	--	----------
416	3,037	693	--	2	3	1,400	----	2	3	5,500 00
411	7,406	555	--	--	--	-------	----	----	--	----------
30	168	38	--	--	--	-------	----	----	--	----------
407	3,082	689	--	--	--	-------	----	----	--	----------
219	782	317	--	--	--	-------	----	----	--	----------
129	261	227	--	--	--	-------	----	----	--	----------
178	251	268	2	1	1	500	----	1	1	1,600 00
4,449	32,638	6,473	3	11	23	31,756	----	11	22	62,600 00

GRAND TRAVERSE COUNTY.—Continued.

11	------	6	--	--	--	-------	----	----	--	----------
-----	------	------	--	--	--	-------	----	----	--	----------
15	------	33	--	--	--	-------	----	----	--	----------
16	------	5	--	--	--	-------	----	----	--	----------
5	12	5	6	--	--	-------	----	----	--	----------
47	12	49	6	--	--	-------	----	----	--	----------

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GENESEE COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	No. of—	No. of Feet of Lumber sawed the past year.	SAW Power Used. Steam.	Water.	No. of Persons employed.
Argentine,	$25,000 00	1	50,000	----	1	------
Atlas,	32,000 00	2	*	----	2	4
†Clayton,	----------	--	----------	----	---	------
Davison,	----------	--	----------	----	---	------
Fenton,	25,800 00	2	850,000	----	2	4
Forest,	----------	1	568,000	1	---	6
Flint,	60,000 00	8	7,550,000	3	5	70
Flushing,	24,643 00	--	----------	----	---	------
Gaines,	----------	--	----------	----	---	------
Genesee,	1,900 00	6	1,197,000	----	6	13
Grand Blanc,	----------	--	----------	----	---	------
Montrose,	----------	--	----------	----	---	------
Mundy,	----------	--	----------	----	---	------
Richfield,	----------	1	300,000	1	---	3
Thetford,	----------	1	200,000	----	1	4
Vienna,	*	4	1,380,000	----	4	18
Total,	$167,343 00	26	12,095,000	5	21	122

GRAND TRAVERSE COUNTY.—Continued.

Antrim,	----------	2	600,000	----	2	6
†Leelanaw,	----------	--	----------	----	---	------
Manistee,	----------	7	13,900,000	4	3	130
Peninsula,	----------	--	----------	----	---	------
Traverse,	----------	3	5,600,000	1	2	81
Total,	----------	12	20,100,000	5	7	217

*Not stated.
†Not reported.

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GENESEE COUNTY.—Continued.

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of Barrels of Oil made the preceding year	No. of Barrels of Peppermint Oil manufactured the preceding year	No. of—	No. of Barrels of Beer made the preceding year	No. of—	No. of Gallons of Liquor made the preceding year.
$500 00	$100 00	--	----	----	--	------	--	---- ----
2,000 00	2,400 00	--	----	----	--	------	--	---- ----
----------	----------	--	----	----	--	------	--	---- ----
----------	----------	--	----	----	--	------	--	---- ----
4,000 00	5,450 00	--	----	----	--	------	--	---- ----
8,000 00	3,976 00	--	----	----	--	------	--	---- ----
45,000 00	51,900 00	--	----	----	1	400	--	---- ----
----------	----------	--	----	----	--	------	--	---- ----
----------	----------	--	----	----	--	------	--	---- ----
6,525 00	5,575 00	--	----	----	--	------	--	---- ----
----------	----------	--	----	----	--	------	--	---- ----
----------	----------	--	----	----	--	------	--	---- ----
----------	----------	--	----	----	--	------	--	---- ----
2,400 00	*	--	----	----	--	------	--	---- ----
3,000 00	2,000 00	--	----	----	--	------	--	---- ----
8,500 00	*	--	----	----	--	------	--	---- ----
$79,925 00	$71,401 00	--	----	----	1	400	--	---- ----

GRAND TRAVERSE COUNTY.—Continued.

$3,000 00	$4,500 00	--	----	----	--	------	--	---- ----
----------	----------	--	----	----	--	------	--	---- ----
50,800 00	83,400 00	--	----	----	--	------	--	---- ----
----------	----------	--	----	----	--	------	--	---- ----
17,000 00	44,200 00	--	----	----	--	------	--	---- ----
$70,800 00	$132,100 00	--	----	----	--	------	--	---- ----

*Not stated.

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GENESEE COUNTY.—Continued.

Townships.	Distilleries.		Fish.	Aggregate of all kinds of Manufactories.		
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested.	No. of Persons employed.	Value of Products for the past year.
Argentine,						
Atlas,				$6,600 00	7	$5,500 00
*Clayton,						
Davison,						
Fenton,						
Forest,						
Flint,				10,000 00	12	10,000 00
Flushing,						
Gaines,						
Genesee,						
Grand Blanc,						
Montrose,						
Mundy,						
Richfield,						
Thetford,						
Vienna,						
Total,				$16,600 00	19	$15,500 00

GRAND TRAVERSE COUNTY.—Continued.

Antrim,				$400 00	3	$330 00
*Leelanaw,						
Manistee,						
Peninsula,			88			
Traverse,			100	500 00	3	2,000 00
Total,			188	$900 00	6	$2,300 00

*Not reported.

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GENESEE COUNTY.—Continued.

MINES WORKED.						
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in pounds, produced the past year.	Aggregate valuation at place of mining of minerals produced the past year.	No of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
						$4,000 00
						3,600 00
						279,452 00
						5,000 00
						3,000 00
						$295,052 00

GRAND TRAVERSE COUNTY.—Continued.

						$11,000 00
						5,000 00
						$16,000 00

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HILLSDALE COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over Seventy-five and under Ninety.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Adams,	93	95	168	215	75	2	1	-	228	88
Allen,	88	81	131	171	63	2	-	-	195	7
Amboy,	63	49	58	82	27	-	-	-	94	14
Camden,	89	95	119	170	54	3	-	-	135	35
Cambria,	89	84	111	207	47	2	-	-	206	45
Fayette	230	228	318	525	115	11	-	-	459	192
Jefferson,	93	103	129	191	52	-	-	-	212	356
Litchfield,	117	123	196	223	106	4	1	-	269	65
Moscow,	73	77	115	148	64	4	-	-	184	26
Pittsford,	121	99	178	231	25	7	-	-	279	55
Ransom,	54	56	88	111	44	-	-	-	135	21
Reading,	101	79	125	201	63	2	-	-	215	53
Scipio,	81	74	136	158	71	2	-	-	187	46
Somerset,	73	75	132	178	70	-	-	-	186	64
Wheatland,	107	101	200	212	118	4	-	-	266	68
Woodbridge,	52	41	71	103	28	1	-	-	81	23
Wright,	88	92	114	154	49	1	-	-	163	83
Total,	1,612	1,552	2,389	3,280	1,071	45	2	-	3,494	1,241

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HILLSDALE COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Adams,	82	85	134	196	67	5	232	38
Allen,	75	81	85	181	95	5	195	6
Amboy,	53	38	35	80	32	1	96	17
Camden,	85	69	110	162	61	4	139	23
Cambria,	96	97	99	178	64	1	206	38
Fayette,	180	219	252	501	134	9	499	145
Jefferson,	100	75	126	194	56	2	215	338
Litchfield,	84	102	133	239	122	2	276	85
Moscow	78	71	87	141	68	3	191	27
Pittsford,	111	107	117	234	99	7	284	59
Ransom,	71	65	78	107	52	3	135	29
Reading,	81	90	105	202	62		217	61
Scipio,	67	74	106	157	98	3	195	56
Somerset,	80	78	97	167	84	2	187	59
Wheatland,	83	95	118	209	122	7	268	56
Woodbridge,	23	41	35	94	26	1	86	8
Wright,	65	60	86	145	51	1	164	56
Total,	1,414	1,447	1,803	3,187	1,293	56	3,585	1,101

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HILLSDALE COUNTY.—CONTINUED.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
--	--	--	--	3	9	649	569	--	--	--	--	1,218
--	--	--	--	3	6	536	522	--	--	--	--	1,058
--	--	--	7	3	5	279	239	--	--	--	7	525
--	--	--	--	8	11	530	491	--	--	--	--	1,021
--	--	--	--	12	16	540	535	--	--	--	--	1,075
2	3	4	5	*	*	1,427	1,295	2	3	4	5	2,736
--	--	--	--	4	4	568	553	--	--	--	--	1,121
--	--	--	--	3	6	770	682	--	--	--	--	1,452
1	--	1	--	--	11	481	448	1	--	1	--	931
--	--	--	--	6	6	661	675	--	--	--	--	1,336
--	--	--	--	5	4	353	376	--	--	--	--	729
--	--	--	--	12	7	571	540	--	--	--	--	1,111
--	1	--	9	4	4	522	505	--	1	--	9	1,037
--	--	2	--	2	7	528	508	--	--	2	--	1,038
--	1	--	--	13	23	742	634	--	1	--	--	1,377
--	--	--	--	1	1	296	220	--	--	--	--	516
--	1	--	--	10	6	498	408	--	1	--	--	907
3	6	7	21	89	126	9,951	9,200	3	6	7	21	19,188

* Not stated.

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HILLSDALE COUNTY.—Continued.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised preceding year
Adams,	19,633	4	5,822	1,801	899	21,916
Allen,	22,925	75	6,261	1,389	843	27,525
Amboy,	8,207		1,287	262	50	2,967
Camden,	26,445	485	3,579	966	489	13,545
Cambria,	22,860		4,730	1,474	768	19,131
Fayette,	18,261		5,903	1,651	1,062	27,731
Jefferson,	14,015		3,605	1,273	694	15,035
Litchfield,	18,596		7,964	2,196	1,297	30,570
Moscow,	22,272		6,836	2,541	997	28,899
Pittsford,	22,740		6,630	1,485	951	20,250
Ransom,	11,730		3,316	888	529	7,746
Reading,	15,318		9,065	1,517	1,023	36,765
Scipio,	21,061		7,745	2,363	979	23,955
Somerset,	18,304		7,478	2,090	852	19,829
Wheatland,	20,964		9,386	2,740	1,277	26,515
Woodbridge,	18,720	480	1,718	504	362	7,145
Wright,	8,264		4,505	742	543	16,080
Total,	310,315	1,044	95,830	25,882	13,614	345,604

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HILLSDALE COUNTY.—CONTINUED.

PRODUCE.						
No. of Acres of Wheat har vested preceding year....	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.....	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.....	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
1,728	22,666	,994	7,025	1,297	8,932	22,607
1,381	18,635	6,376	8,316	797	6,796	16,144
261	3,924	798	1,383	311	281	945
652	10,951	1,384	4,326	423	1,462	7,215
1,113	19,382	3,017	5,908	750	2,486	10,018
1,519	23,703	5,114	7,577	1,330	9,423	12,358
970	14,784	1,977	4,722	628	2,463	25,240
2,148	22,703	5,487	9,526	2,589	7,731	28,405
2,076	32,994	7,848	8,556	1,741	17,485	24,172
1,310	25,366	3,699	4,979	2,012	7,170	23,640
677	10,665	1,284	2,863	566	1,278	10,650
1,259	24,741	3,844	9,331	1,292	1,907	53,985
1,902	24,190	6,070	6,982	1,107	8,232	36,856
1,790	27,374	3,818	8,889	1,644	8,112	16,766
2,080	33,688	4,001	8,001	1,540	11,706	59,422
458	73,271	1,686	1,979	283	529	12,270
796	12,654	2,026	4,831	1,018	2,722	18,256
22,120	341,247	63,417	105,194	19,328	98,715	378,949

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HILLSDALE COUNTY.—CONTINUED.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE No. of Horses 1 year old and over.	No. of Neat Cattle other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Adams,	32,364	3,410	8,320	232	215	217
Allen,	25,095	3,980	2,075	222	303	212
Amboy,	9,519	500	1,320	53	136	86
Camden,	12,686	990	5,565	149	342	177
Cambria,	21,213	1,680	2,210	188	224	179
Fayette,	23,330	2,300	.....	544	242	177
Jefferson,	22,735	140	1,723	140	195	189
Litchfield,	29,583	3,962	2,512	300	317	210
Moscow,	25,440	4,288	266	243	357	209
Pittsford,	30,350	12,273	3,695	340	316	216
Ransom,	10,691	870	510	112	189	130
Reading,	24,700	3,458	29,440	330	461	221
Scipio,	15,725	100	.....	208	193	223
Somerset,	27,435	2,540	1,227	281	335	192
Wheatland,	28,129	3,796	5,133	423	587	248
Woodbridge,	4,940	360	5,740	78	106	108
Wright,	18,097	1,315	1,772	167	349	140
Total,	362,032	45,962	71,508	4,010	4,867	3,134

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HILLSDALE COUNTY.—Continued.

STOCK.				FLOURING MILLS.						
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Males.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested
458	3,219	681	..	..	..	.....	.....	.....	..	.....
326	2,597	633	..	..	..	.....	.....	.....	..	.....
153	45	207	..	1	2	1,200	*	*	*	*
330	656	563	1	..	..	.....	.....	.....	..	.....
348	1,022	740	..	1	2	1,000	.....	1	1	$3,000 00
334	4,049	589	..	4	11	31,000	†2	1	13	55,000 00
319	1,026	748	..	1	2	300	*	*	2	3,000 00
505	3,683	844	..	..	..	.....	.....	.....	..	.....
374	5,728	656	..	..	..	.....	.....	.....	..	.....
564	3,875	1,529	..	..	..	.....	.....	.....	..	.....
229	529	421	..	..	..	.....	.....	.....	..	.....
405	2,789	857	..	..	..	.....	.....	.....	..	.....
316	2,454	649	..	2	4	3,750	.....	2	4	21,500 00
430	3,352	642	..	..	..	.....	.....	.....	..	.....
573	4,512	1,170	2	..	..	.....	.....	.....	..	.....
179	222	181	..	..	..	.....	.....	.....	..	.....
298	1,030	735	..	..	..	.....	.....	.....	..	.....
6,151	40,788	11,845	3	9	21	37,250	2	4	20	$82,500 00

*Not stated.
†One steam and water.

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HILLSDALE COUNTY.—CONTINUED.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Adams,		3	1,026,000	2	1	8
Allen,		1	300,000	1		*
Amboy,	*	2	320,000	*	*	4
Camden,		3	650,000		3	*
Cambria,	*	6	2,300,000	2	4	17
Fayette,		4	1,300,000	2	2	9
Jefferson,	$1,000 00	4	425,000		*	6
Litchfield,		2	500,000	2		10
Moscow,		1	150,000		1	1
Pittsford,		5	1,450,000	1	4	7
Ransom,		2	25,000		2	2
Reading,		3	907,500	1	2	7
Scipio,	4,000 00	2	150,000		2	2
Somerset,		4	865,000	1	3	10
Wheatland,		2	300,000	1	1	4
Woodbridge,						
Wright,		3	540,000	1	2	6
Total,	$5,000 00	47	11,708,500	14	27	93

*Not stated.

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HILLSDALE COUNTY.—Continued.

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of Barrels of Oil made the preceding year.	No. of Barrels of Peppermint Oil manufactured the preceding year.	No. of—	No. of Barrels of Beer Made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.
*	*							
*	*							
$2,000 00	$1,000 00							
3,400 00	2,400 00							
3,500 00	13,560 00							
7,500 00	*							
4,500 00	2,125 00							
2,800 00	3,500 00							
1,000 00	900 00							
4,700 00	1,900 00							
2,100 00	1,100 00							
4,650 00	56,500 00							
1,200 00	350 00						1	1,000
3,100 00	6,040 00							
1,800 00	875 00							
3,950 00	5,320 00							
$51,200 00	$95,570 00						1	1,000

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HILLSDALE COUNTY.—Continued.

TOWNSHIPS.	Distilleries.		Fish.	Aggregate of all kinds of Manufactories.		
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Adams,						
Allen,						
Amboy						
Camden						
Cambria,						
Fayette,				$115,000 00	24	*
Jefferson,				350 00	2	$300 00
Litchfield,						
Moscow,						
Pittsford,						
Ransom,						
Reading,						
Scipio,		6				
Somerset,						
Wheatland,						
Woodbridge,						
Wright,				400 00	6	2,010 00
Total,		6		$115,750 00	32	$2,310 00

* Not stated.

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HILLSDALE COUNTY.—Continued.

MINES WORKED.						
No. of	Kind of Mineral	Aggregate quantity of Mineral, in Pounds, produced the past year	Aggregate valuation at place of mining of minerals produced the past year	No. of Persons employed	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale
						$396,500 00
						1,800 00
						$398,300 00

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HOUGHTON COUNTY.

TOWNSHIPS.	NO. OF MALES.										
	Under Five years of age	Over Five and under Ten	Over Ten and under Twenty one	Over Twenty-one and under Forty-five	Over Forty-five and under Seventy-five	Over 75 and under 90	Over Ninety and under 100	One Hundred and over	Married	Unmarried	
Cop'r Harb'r,	12	12	10	156	3	..	..	..	67	2	
Eagle Harb'r,	105	48	97	623	14	..	..	..	163	474	
Houghton,	96	54	66	616	14	..	..	..	238	405	
Isle Royal,*	.....	.....	.....	.....	.....	..	..	..	.....	.....	
L'Anse,†	.....	.....	.....	.....	.....	..	..	..	.....	.....	
Total,	213	114	173	1,395	31	..	..	..	468	881	

*Not reported officially. Total population, 93.

†Not reported.

HURON* COUNTY.

Total,	38	72	62	295	8	..	..	..	98	375

*Agricultural products not reported.

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HOUGHTON COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over	Married.	Unmarried.
Cop'r Harb'r,	19	9	11	43	4	----	41	6
Eagle Harb'r,	93	55	52	278	16	----	137	157
Houghton,	92	52	25	179	14	----	176	23
Isle Royal,	----	----	----	----	----	----	----	----
L'Ance,	----	----	----	----	----	----	----	----
Total,	204	116	88	500	34	----	354	186

HURON COUNTY.—Continued.

Total,	27	39	45	110	5	1	94	132

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HOUGHTON COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL
..	..	..	..	4	1	193	86	..	..	..	....	279
..	..	..	1	8	23	887	494	..	..	..	1	1,382
1	..	..	3	3	4	846	362	1	..	..	3	1,212
..	..	..	..	....	...	.....	.....	..	..	..	....	.....
..	..	..	..	....	...	.....	.....	..	..	..	....	.....
1	..	..	4	15	28	1,926	942	1	..	..	4	2,873

HURON COUNTY.—Continued.

..	..	..	..	....	...	475	227	..	..	..	....	702

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HOUGHTON COUNTY.—Continued.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year.
Cop'r Harb'r,	21,709	1,680	71	.....	.....	.....
Eagle Harb'r,	9,590	19,281	249	.....	.....	.....
Houghton,	15,780	.....	685	.....	.....	.....
Isle Royal,	.....	.....	.....	.....	.....	.....
L'Anse,	.....	.....	.....	.....	.....	.....
Total,	47,079	20,961	1,005	.....	.....	.....

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HOUGHTON COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
			3,300			
			3,050	45		
		3,700	7,850	305		
		3,700	14,200	350		

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HOUGHTON COUNTY.—CONTINUED.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, 1 year old and over.	No. of Work Oxen.
Cop'r Harb'r,				23		12
Eagle Harb'r,				46		22
Houghton,				29		25
*Isle Royal,						
L'Anse,						
Total,				98		59

*Not reported.

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HOUGHTON COUNTY.—Continued.

STOCK.				FLOURING MILLS.					
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested
4		8	1							
	12									
16		29	10							
20	12	37	11							

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HOUGHTON COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Cop'r Harb'r,		1	*		1	4
Eagle Harb'r		4	670,000	2	2	19
Houghton,		4	*	2	2	*
†Isle Royal,						
L'Anse,						
Total,		9	670,000	4	5	23

*Not stated.
†Not reported.

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HOUGHTON COUNTY.—CONTINUED.

MILLS.		OIL MILLS			BREWERIES.				
Amount of Capital invested	Value of Products for the past year	No. of—	No. of barrels of Oil made the preceding year	No. of Barrels of Peppermint Oil manufactured the preceding year	No. of—	No. "Barrels of Beer made the preceding year	No. of	No.	quar
$6,000 00	*								
4,500 00	$12,750 00								
*	*								
$10,500 00	$12,750 00								

*Not stated.

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HOUGHTON COUNTY.—CONTINUED.

TOWNSHIPS.	DISTILLERIES.		FISH.	AGGREGATE OF ALL KINDS OF MANUFACTORIES.		
	No. Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Cop'r Harb'r,						
Eagle Harb'r			100			
Houghton,						
Isle Royal,						
L'Ance,						
Total,			100			

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HOUGHTON COUNTY.—Continued.

MINES WORKED.							
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in pounds, produced the past year.	Aggregate valuation at place of Mining of Minerals produced the past year.	No. of Persons employed.	Amount of Capital invested		Value of all Merchandize imported the preceding year for the purpose of sale.
11	Copper.	2,000	$440 00	147	$213,000 00		$12,600 00
8	"	472,081	66,091 34	413	*		
10	"	2,973,800	594,000 00	575	635,000 00		
..	.....	.....	.....	.....	.....		.....
..	.....	.....	.....	.....	.....		.....
29	.....	3,447,881	$660,531 34	1,135	$848,000 00		$12,600 00

* Not stated.

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INGHAM COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Alaiedon,	37	28	78	84	29	--	--	--	94	156
Aurelius,	62	77	101	114	45	2	--	--	106	255
Bunker Hill,	39	34	72	68	37	--	--	--	78	172
Delhi,	50	55	72	112	42	2	--	--	136	196
Ingham,	60	70	129	139	47	3	--	--	161	271
Lansing,	150	96	163	302	81	--	--	--	301	491
Le Roy,	42	31	50	75	20	1	--	--	79	132
Leslie,	67	53	110	142	50	1	--	--	161	275
Locke,	38	43	68	79	34	--	--	--	96	166
Meridian,	44	44	75	101	36	--	--	--	85	43
Onondaga,	92	66	126	153	58	2	--	--	176	35
Phelpstown,	56	43	52	93	19	8	--	--	100	22
Stockbridge,	47	66	116	103	56	4	--	--	132	27
Vevay,	86	64	114	164	44	2	--	--	173	299
Wheatfield,	32	20	49	56	27	--	1	--	63	44
White Oak,	49	54	96	90	38	2	--	--	101	28
Total,	951	844	1,471	1,875	663	27	1	--	2,042	2,612

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INGHAM COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Alaiedon,	42	45	62	64	32	3	94	152
Aurelius,	69	52	74	125	47	2	148	221
Bunker Hill,	33	26	49	62	37	....	82	125
Delhi,	62	53	56	110	30	2	127	180
Ingham,	60	73	86	131	50	13	166	246
Lansing,	126	92	158	282	103	3	301	463
Le Roy,	37	38	36	58	25	2	79	115
Leslie,	70	64	67	135	55	4	163	235
Locke,	49	33	47	72	36	....	95	142
Meridian,	54	34	55	93	44	2	92	19
Onondaga,	77	61	73	161	47	2	180	28
Phelpstown,	36	36	45	90	30	1	100	21
Stockbridge,	57	63	70	124	58	2	137	48
Vevay,	81	59	89	160	47	4	177	267
Wheatfield,	28	28	31	51	36	....	65	13
White Oak,	47	50	65	89	37	1	102	26
Total,	928	807	1,063	1,807	714	41	2,108	2,301

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INGHAM COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
	--	4	10	2	7	256	248	--	--	4	10	518
	--	3	--	7	19	401	369	--	--	3	----	773
	--	--	--	---	4	250	207	--	--	--	----	457
	--	--	--	---	3	333	313	--	--	--	----	646
	--	--	--	10	10	448	413	--	--	--	----	861
	--	--	--	6	19	792	764	--	--	--	----	1,556
	--	--	--	---	---	219	196	--	--	--	----	415
	2	--	--	8	5	423	395	--	2	--	----	820
	--	--	--	1	3	262	237	--	--	--	----	499
	--	--	--	3	5	300	282	--	--	--	----	582
1	--	1	--	7	8	497	421	1	--	1	----	920
	1	--	--	---	2	271	238	--	1	--	----	510
	--	2	1	10	7	392	374	--	--	2	1	769
	1	--	4	3	7	474	440	--	1	--	4	919
	--	--	--	---	---	185	174	--	--	--	----	359
	--	--	--	7	5	329	289	--	--	--	----	618
1	4	10	15	69	104	5,832	5,360	1	4	10	15	11,222

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INGHAM COUNTY.—Continued.

TOWNSHIPS.	LAND. Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year
Alaiedon,	19,916	------	1,872	623	225	3,982
Aurelius,	19,707	------	2,621	712	382	6,435
Bunker Hill,	10,405	------	2,483	832	346	4,885
Delhi,	10,754	5	2,191	576	358	10,870
Ingham,	19,829	------	7,594	2,027	941	14,781
Lansing,	6,672	------	1,027	211	92	1,875
LeRoy,	5,220	------	1,040	398	179	2,005
Leslie,	11,908	------	2,864	1,014	650	11,200
Locke,	7,187	------	1,613	497	229	3,723
Meridian,	21,240	------	1,836	587	248	6,135
Onondaga,	13,893	------	5,322	1,947	594	10,628
Phelpstown,	6,282	------	1,893	672	311	5,352
Stockbridge,	19,452	------	4,549	2,039	438	5,045
Vevay,	12,494	------	3,422	734	441	8,598
Wheatfield,	5,735	------	1,624	431	163	1,772
White Oak,	10,273	------	2,913	975	436	7,658
Total,	200,967	5	44,864	14,275	6,033	104,964

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INGHAM COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year	No. of Bushels of all other kinds of Grain raised the preceding year	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year
335	5,191	1,626	2,026	643	1,401	7,446
493	7,958	1,228	2,518	500	2,241	3,482
730	8,452	232	4,485	1,207	2,751	4,850
457	8,208	2,002	3,057	574	1,666	7,511
1,780	21,025	4,904	9,274	1,735	5,051	29,657
170	3,407	2,356	1,875	194	389	1,700
262	3,562	952	1,444	437	438	2,815
936	12,073	3,655	6,278	790	2,324	6,396
489	5,160	1,484	2,396	628	1,326	3,781
334	4,844	1,892	2,717	413	519	2,280
1,539	17,324	5,302	5,121	1,038	3,181	72,38
513	6,209	1,502	1,860	570	1,394	18,205
1,625	22,691	2,723	3,119	1,770	4,432	5,656
508	6,490	2,797	4,549	934	2,777	20,953
287	4,251	913	683	301	848	3,140
636	8,764	2,809	4,042	1,269	2,209	50,980
11,094	145,609	36,377	55,444	13,003	32,947	176,090

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INGHAM COUNTY.—CONTINUED.

TOWNSHIPS	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of sugar manufactured the present year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Alaiedon,	8,915	.....	8,145	45	234	87
Aurelius,	12,465	756	10,540	70	203	144
Bunker Hill,	16,764	880	40	84	205	118
Delhi,	12,255	610	11,181	77	182	94
Ingham,	25,015	1,626	8,648	218	533	238
Lansing,	3,159	.....	2,090	131	75	78
Le Roy,	8,040	184	6,285	51	122	75
Leslie,	18,390	1,156	13,170	106	187	208
Locke,	14,812	1,693	7,949	51	217	104
Meridian,	7,595	250	3,449	46	145	116
Onondaga,	17,761	800	3,370	159	256	233
Phelpstown,	8,030	200	440	84	98	103
Stockbridge	22,330	2,180	170	167	365	218
Vevay,	17,845	1,030	12,428	143	324	162
Wheatfield,	7,165	770	2,374	41	137	78
White Oak,	18,120	610	3,332	98	276	158
Total,	218,652	12,945	93,611	1,571	3,559	2,219

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INGHAM COUNTY.—Continued.

STOCK.				FLOURING MILLS.						
							Power Used.			
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Run of Stone.	No. of Bushels of Flour made the preceding year.	Steam.	Water.	No. of Persons employed.	Amount of Capital invested
134	550	233	..	..	..	.....	.....	.....	..	.....
241	664	525	..	..	..	.....	.....	.....	..	.....
253	1,031	259	2	..	..	.....	.....	.....	..	.....
205	658	338	..	..	..	.....	.....	.....	..	.....
494	2,112	914	..	..	..	.....	.....	.....	..	.....
241	269	256	..	1	3	10,000	....	1	..	$15,000 00
148	249	243	..	..	..	.....	.....	.....	..	.....
276	968	463	1	..	..	.....	.....	.....	..	.....
191	582	202	..	..	..	.....	.....	.....	..	.....
170	223	305	..	..	..	.....	.....	.....	..	.....
302	1,543	584	..	1	3	2,000	....	1	2	5,000 00
149	459	228	..	1	2	200	....	1	1	*
334	1,885	391	..	..	..	.....	.....	.....	..	.....
286	951	496	..	1	2	1,250	.....	1	..	560 00
141	290	210	..	..	..	.....	.....	.....	..	.....
239	1,038	441	..	..	..	.....	.....	.....	..	.....
3,804	13,472	6,088	3	4	10	13,450	.....	4	3	$20,560 00

*Not stated.

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INGHAM COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				No. of Persons employed.
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		
				Steam.	Water.	
Alaiedon,		1	50,000		1	2
Aurelius,						
Bunker Hill,		1	100,000	1		2
Delhi,						
Ingham,		1	400,000	1		3
Lansing,	*	1	*		1	4
Le Roy,		1	626,000	1		6
Leslie,		3	1,350,000	2	1	12
Locke,						
Meridian,		1	500,000		1	4
Onondaga,	*	2	550,000		2	4
Phelpstown,	$1,000 00	1	100,000		1	1
Stockbridge,						
Vevay,	500 00	1	75,000		1	2
Wheatfield,		1	200,000		1	2
White Oak,		1	200,000	1		6
Total,	$1,500 00	15	3,651,000	6	9	48

*Not stated.

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INGHAM COUNTY.—CONTINUED.

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of Barrels of Oil made the preceding year	No. of Barrels of Peppermint Oil manufactured the preceding year	No. of—	No. of Barrels of Beer made the preceding year	No. of—	No. of Gallons of Liquor made the preceding year.
$200 00	$400 00							
1,500 00	350 00							
1,500 00	3,200 00							
6,000 00	*							
*	*							
8,000 00	3,130 00							
2,000 00	500 00							
2,000 00	*							
*	800 00							
200 00								
1,000 00	600 00							
2,200 00	1,400 00							
$24,600 00	$15,380 00							

* Not stated.

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INGHAM COUNTY.—CONTINUED.

TOWNSHIPS.	DISTILLERIES.		FISH.	AGGREGATE OF ALL KINDS OF MANUFACTORIES.		
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Alaiedon,						
Aurelius,						
Bunker Hill,						
Delhi,						
Ingham,						
Lansing,				$19,875 00	45	$23,250 00
Le Roy,						
Leslie,						
Locke,						
Meridian,						
Onondaga,						
Phelpstown,						
Stockbridge,						
Vevay,						
Wheatfield,						
White Oak,						
Total,				$19,875 00	45	$23,250 00

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INGHAM COUNTY.—Continued.

MINES WORKED.						
No. of—	Kind of Mineral.	Aggregate quantity of Mineral in pounds, produced the past year.	Aggregate valuation at place of mining of minerals produced the past year.	No of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
						$81,700 00
						5,050 00
	Coal.	60 tons.	$180 00	8	$50 00	
						10,550 00
		60 tons.	$180 00	8	$50 00	$97,300 00

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IONIA COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over Seventy-five and under Ninety.	Over Ninety and under 100.	One hundred and over.	Married.	Unmarried.
Berlin,	55	44	66	100	25	..	..	..	103	20
Boston,	51	45	68	117	38	2	..	..	134	23
Campbell,	22	11	25	48	20	1	..	..	50	77
Danby,	54	43	58	76	23	..	..	..	89	8
Easton,	54	51	81	100	45	1	..	..	107	25
Ionia,	82	83	135	225	53	..	..	..	204	374
Keene,	80	87	97	127	56	2	..	..	159	25
Lyons,	76	84	97	164	61	3	..	..	183	297
North Plains,	51	41	66	101	31	..	..	..	103	21
Odessa,	22	19	16	42	7	..	..	..	38	11
Orange,	69	48	74	100	23	1	..	..	100	24
Orleans,	81	41	66	115	38	2	..	..	122	221
Otisco,	139	131	140	200	66	4	..	..	209	55
Portland,	89	87	116	172	71	3	..	..	196	38
Ronald,	39	43	75	93	48	..	..	..	117	173
Sebewa,	24	26	52	57	19	1	..	..	61	16
Total,	988	884	1,234	1,836	624	19	..	..	1,980	1,408

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IONIA COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Berlin,	55	49	55	89	32		103	21
Boston,	47	48	60	109	48	2	134	23
Campbell,	15	13	20	40	13		48	53
Danby,	34	30	37	69	27	1	91	6
Easton,	40	37	66	87	45	3	111	21
Ionia,	122	71	111	189	58		196	355
Keene,	82	77	72	82	46	3	159	10
Lyons,	84	62	98	181	68	3	188	308
North Plains,	36	43	56	95	27		103	10
Odessa,	21	19	34	35	10		38	2
Orange,	49	51	59	89	26	2	94	19
Orleans,	68	57	66	104	42	1	122	216
Otisco,	119	123	147	177	72	1	209	51
Portland,	85	68	91	178	74	1	179	52
Ronald,	53	36	43	93	45	1	114	147
Sebewa,	29	32	23	46	21	1	61	7
Total,	939	816	1,038	1,663	654	19	1,950	1,310

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IONIA COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
--	--	--	--	3	3	290	280	--	--	--	----	570
--	--	--	--	9	4	321	314	--	--	--	----	635
--	--	--	--	3	2	127	101	--	--	--	----	228
--	1	--	--	---	1	253	198	--	1	--	----	452
--	1	--	--	7	4	332	278	--	1	--	----	611
--	--	--	--	5	4	578	551	--	--	--	----	1,129
--	1	1	--	9	5	449	362	--	1	1	----	813
--	--	--	--	4	4	485	496	--	--	--	----	981
--	--	--	--	3	4	292	257	--	--	--	----	549
--	--	--	--	5	---	106	119	--	--	--	----	225
--	--	1	--	8	4	315	276	--	--	1	----	592
--	--	3	--	9	12	343	338	--	--	3	----	684
2	--	--	--	---	---	680	639	2	--	--	----	1,321
1	--	1	--	5	3	537	497	1	--	1	----	1,036
--	--	1	--	5	1	298	271	--	--	1	----	570
--	--	--	--	2	2	179	152	--	--	--	----	331
3	3	7	--	77	53	5,585	5,129	3	3	7	----	10,727

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IONIA COUNTY.—Continued.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised preceding year
Berlin,	24,703	40	2,725	591	530	14,318
Boston,	20,377	.....	2,817	667	360	7,397
Campbell,	3,744	.....	383	164	141	2,783
Danby,	6,0[illegible]	.....	907	352	227	4,590
Easton,	12,488	.....	2,936	591	402	11,041
Ionia,	15,522	.....	4,356	1,024	406	10,243
Keene,	22,190	.....	3,176	1,214	721	18,035
Lyons,	13,853	.....	3,933	1,862	575	18,870
North Plains,	6,356	416	3,141	687	403	8,529
Odessa,	17,781	.....	500	113	107	3,725
Orange,	20,414	.....	2,186	654	359	9,623
Orleans,	10,837	.....	3,347	849	429	9,623
Otisco,	22,860	.....	6,180	2,085	947	3,810
Portland,	17,359	.....	3,911	1,171	440	16,612
Ronald,	10,575	.....	5,844	1,018	406	8,481
Sebewa,	18,752	.....	949	232	152	4,000
Total,	243,836	456	47,296	13,274	6,605	151,689

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IONIA COUNTY.—CONTINUED.

PRODUCE.						
No. of Acres of Wheat har-vested preceding year.....	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised pre-ceding year.....	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.....	No. of Pounds of Wool sheared preceding year	No. of Pounds of Pork mar-keted the preceding year.
557	10,714	4,315	5,128	549	2,854	34,169
623	9,038	2,278	4,905	700	2,924	19,523
137	2,001	352	881	91	814	2,735
221	2,808	1,475	1,784	165	459	1,860
594	9,896	3,473	8,995	914	5,316	14,256
828	13,572	5,592	8,420	799	6,036	18,889
1,364	18,615	6,320	7,409	663	1,872	11,193
1,247	18,162	7,407	9,345	673	3,996	15,900
699	9,603	4,506	5,094	371	3,012	4,200
102	1,510	245	1,271	142	233	2,800
578	9,781	3,450	4,462	427	1,062	11,640
802	10,934	6,553	5,897	618	1,381	2,571
2,302	25,752	12,485	10,780	684	4,2 3	34,260
744	12,734	4,305	7,555	642	2,634	13,185
1,029	12,921	6,476	8,074	433	2,706	51,060
162	3,121	1,100	1,604	243	481	1,450
11,992	171,162	70,332	91,599	8,114	39,553	239,605

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IONIA COUNTY.—Continued.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Berlin,	18,675	1,340	22,268	78	251	138
Boston,	5,295	1,450	13,165	69	283	140
Campbell,	2,345	150	3,475	18	50	54
Danby,	3,990	830	5,745	35	76	62
Easton,	19,561	7,505	8,190	84	291	151
Ionia,	12,724	3,080	1,385	155	284	166
Keene,	17,670	775	12,319	113	295	183
Lyons,	1,630	800	6,270	182	426	207
North Plains,	7,336	760	6,210	77	174	108
Odessa,	3,037	330	5,916	31	61	36
Orange,	12,804	870	12,060	59	248	132
Orleans,	11,689	1,269	4,570	94	225	112
Otisco,	25,065	2,133	803	163	436	237
Portland,	20,081	750	9,181	184	400	168
Ronald,	11,880	950	4,430	89	170	163
Sebewa,	6,510	360	8,381	31	135	60
Total,	180,292	23,352	124,368	1,462	3,805	2,117

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IONIA COUNTY.—Continued.

STOCK.				FLOURING MILLS.						
No. of Milch Cows	No. of Sheep	No. of Swine over 6 months old	No. of Mules	No. of	No. Runs of Stone	No. of Barrels of Flour made the preceding year	Power Used. Steam	Power Used. Water	No. of Persons employed	Amount of Capital invested
232	359	503	..	..	..	.....	....	....	..	.....
213	932	408	..	1	1	2,000	....	1	1	$4,000 00
62	105	135	..	..	..	.....	....	....	..	.....
105	293	153	..	..	..	.....	....	....	..	.....
240	1,278	375	..	..	..	.....	....	....	..	.....
293	1,634	439	2	2	3	5,500	1	1	6	7,500 00
291	1,221	650	..	..	..	.....	....	....	..	.....
372	1,604	748	..	1	2	3,550	....	1	*	6,000 00
129	691	234	..	..	..	.....	....	....	..	.....
67	141	148	..	..	..	.....	....	....	..	.....
190	302	347	..	..	..	.....	....	....	..	.....
191	509	357	..	..	..	.....	....	....	..	.....
377	2,089	683	..	2	4	2,400	....	2	4	7,500 00
321	878	542	..	1	3	2,400	....	1	2	3,500 00
197	1,049	2 0	..	..	..	.....	....	....	..	.....
107	262	157	..	1	1	2,000	....	1	*	*
3,387	13,848	6,169	2	8	14	17,850	1	7	13	$28,500 00

*Not stated.

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IONIA COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Berlin,		1	45,000	*	*	2
Boston,	*	1	100,000		1	1
Campbell,		1	100,000		1	2
Danby,						
Easton,		2	250,000		2	7
Ionia,	$32,000 00	2	240,000	1	1	4
Keene,						
Lyons,	21,300 00	4	1,540,000		4	8
North Plains,						
Odessa,		1	120,000		1	2
Orange,		1	70,000		1	2
Orleans,		1	400,000		1	4
Otisco,	1,800 00	1	2,375,000		1	24
Portland,	1,400 00	1	150,000		1	1
Ronald,						
Sebewa,	*	2	250,000		2	*
Total,	$46,500 00	18	5,650,000	1	16	55

*Not stated.

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IONIA COUNTY.—CONTINUED.

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested.	Value of Products for the past year.	No. of—	No. of Barrels of Oil made the preceding year.	No. of Barrels of Peppermint Oil manufactured the preceding year.	No. of—	No. of Barrels of Beer Made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.
$300 00	$100 00							
*	500 00							
1,000 00	*							
2,300 00	15,000 00							
2,000 00	1,400 00						1	4,000
1,900 00	7,600 00							
600 00	400 00							
800 00	420 00							
1,500 00	2,400 00							
6,500 00	12,000 00							
400 00	900 00							
*	*							
$17,300 00	$40,720 00						1	4,000

*Not stated.

IONIA COUNTY.—Continued.

TOWNSHIPS.	Distilleries.		Fish.	Aggregate of all kinds of Manufactories.		
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Berlin,						
Boston,				$500 00	2	*
Campbell,						
Danby,						
Easton,						
Ionia,				4,200 00	12	$4,000 00
Keene,						
Lyons,				2,000 00	3	2,000 00
North Plains,						
Odessa,						
Orange,			4			
Orleans,						
Otisco,						
Portland,				3,000 00	8	100 00
Ronald,						
Sebewa,						
Total,			4	$9,700 00	25	$6,100 00

*Not stated.

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IONIA COUNTY.—Continued.

MINES WORKED.							
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in Pounds, produced the past year.	Aggregate valuation at place of mining of minerals produced the past year	No. of Persons employed.	Amount of Capital invested		Value of all Merchandize imported the preceding year for the purpose of sale.
							$50,000 00
							62,500 00
							200 00
							15,000 00
							23,200 00
							$150,900 00

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JACKSON COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Columbia,	76	101	172	180	82	8	-	-	200	61
Concord,	75	79	154	189	70	3	-	-	210	359
Grass Lake,	92	116	221	216	113	7	-	-	246	53
Hanover,	69	58	133	128	78	3	-	-	170	63
Henrietta	51	40	93	123	54	1	-	-	121	55
Jacks'n, (vill)	219	179	339	833	130	5	-	-	532	1,208
Jacks'n, (t'n)	137	128	250	259	125	4	1	-	308	596
Leoni,	121	100	243	241	104	4	-	-	230	531
Liberty,	63	72	116	155	56	3	-	-	167	298
Napoleon,	95	92	217	305	121	4	-	-	280	150
Parma,	84	83	169	196	80	5	-	-	186	10
Pulaski,	85	73	104	156	47	-	-	-	160	43
Rives,	58	60	121	119	43	2	-	-	133	30
Sandstone,	81	77	151	162	77	5	-	-	174	57
Spring Arb'r,	66	75	152	156	76	2	-	-	182	46
Springport,	75	69	90	138	48	2	1	-	149	40
Tompkins,	55	51	89	131	52	1	-	-	99	32
Waterloo,	105	91	177	191	80	1	-	-	221	37
Total,	1,607	1,544	2,991	3,883	1,466	60	2	-	3,768	3,669

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JACKSON COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Columbia,	62	77	130	172	94	3	204	52
Concord,	61	76	99	188	81	1	213	297
Grass Lake,	90	88	143	225	125	7	255	142
Hanover,	56	51	107	139	86	3	175	55
Henrietta,	54	52	55	105	42	3	121	32
Jacks'n, (vill)	200	182	256	694	189	9	533	998
Jackson, (t'n)	120	137	170	279	139	2	308	539
Leoni,	92	113	139	209	104	11	241	424
Liberty,	82	76	69	148	51	2	164	266
Napoleon,	105	90	137	240	124	....	269	95
Parma,	72	82	123	192	8	6	186	*
Pulaski,	65	71	74	148	52	2	166	36
Rives,	49	47	82	124	55	1	139	36
Sandstone,	87	67	113	160	70	14	177	32
Spring Arb'r,	62	53	80	166	75	4	192	25
Springport,	65	60	64	143	48	1	156	32
Tompkins,	64	43	77	125	51	....	100	25
Waterloo,	100	95	108	190	84	1	225	36
Total,	1,486	1,460	2,026	3,647	1,478	70	3,824	3,122

*Not stated.

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JACKSON COUNTY.—CONTINUED.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
2	2	..	..	20	4	619	538	2	2	..	....	1,161
..	..	1	..	4	8	570	506	..	..	1	....	1,077
..	2	1	..	6	8	765	678	..	2	1	....	1,446
..	..	..	..	8	14	469	442	..	..	..	....	911
1	1	3	..	8	8	362	311	1	1	3	....	678
..	2	2	52	31	36	1,740	1,530	..	2	2	52	3,326
4	1	5	..	35	21	904	847	4	1	5	....	1,761
11	..	..	9	21	19	813	668	11	..	..	9	1,501
..	1	..	1	10	15	465	428	..	1	..	1	895
1	..	1	3	20	15	834	696	1	..	1	3	1,535
..	..	2	7	6	7	617	483	..	..	2	7	1,109
..	1	2	..	3	6	465	412	..	1	2	....	880
..	1	..	1	8	9	403	358	..	1	..	1	763
2	..	..	1	13	11	553	511	2	..	..	1	1,067
1	1	2	..	4	4	527	440	1	1	2	....	971
..	..	3	1	7	8	423	381	..	..	3	1	808
..	1	..	..	2	6	379	360	..	1	..	....	740
..	1	1	1	13	8	645	578	..	1	1	1	1,226
22	14	23	76	219	207	11,553	10,167	22	14	23	76	21,855

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JACKSON COUNTY.—Continued.

TOWNSHIPS.	LAND. Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year.
Columbia,	24,040	------	10,566	2,965	1,311	35,086
Concord,	21,395	11	10,080	4,369	1,097	37,625
Grass Lake,	27,393	------	13,193	3,966	1,260	24,500
Hanover,	22,225	------	10,660	3,427	1,074	21,243
Henrietta,	21,881	------	5,679	1,582	520	9,880
Jackson,	30,472	260	10,303	3,705	1,271	34,631
Leoni,	18,423	------	9,720	3,249	1,892	22,627
Liberty,	18,203	4	6,574	2,845	975	22,295
Napoleon,	26,343	------	10,822	3,292	1,362	28,070
Parma,	20,208	------	9,646	3,491	936	29,830
Pulaski,	23,081	------	7,991	2,222	1,387	18,252
Rives	21,334	------	5,977	1,660	607	14,230
Sandstone,	16,527	------	5,953	2,278	698	16,575
Spring Arbor	20,653	------	8,269	3,460	828	21,650
Springport,	22,000	------	692	2,517	646	14,610
Tompkins,	21,477	------	5,337	2,115	542	11,395
Waterloo,	27,782	------	9,207	3,267	783	12,325
Total,	383,437	275	140,674	50,410	17,189	374,824

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JACKSON COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year	No. of Bushels of all other kinds of Grain raised the preceding year.	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork manufactured the preceding year
2,596	34,239	4,566	14,678	2,436	12,558	29,695
3,444	60,689	8,025	8,668	1,423	21,301	42,791
3,700	52,000	3,597	10,923	1,788	1,300	23,953
3,169	46,459	3,961	7,512	1,277	10,464	27,773
1,402	17,623	2,231	9,484	2,009	5,539	14,505
4,445	50,910	5,627	15,269	4,529	16,539	29,940
2,646	29,527	5,026	1,416	2,604	6,586	14,204
2,635	35,114	3,094	9,526	1,480	9,405	35,472
3,005	45,264	6,239	9,622	1,944	16,170	40,343
2,822	45,281	10,917	10,892	1,655	12,922	34,122
2,592	36,583	4,233	5,079	993	13,616	12,859
1,582	21,327	5,371	5,601	1,734	5,592	11,175
1,962	28,850	6,494	9,320	2,108	14,170	19,975
3,041	49,461	4,685	7,520	2,700	20,508	33,700
2,656	43,560	11,181	7,470	1,765	10,663	17,002
1,588	21,696	6,672	5,210	1,027	4,097	16,279
2,778	35,618	3,921	8,778	2,637	6,523	12,950
46,063	654,201	95,840	146,968	34,109	199,653	416,738

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JACKSON COUNTY.—Continued.

TOWNSHIPS	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the present year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Columbia,	32,390	900		349	523	260
Concord,	46,425	5,695		321	361	272
Grass Lake,	29,840	1,703		376	345	188
Hanover,	16,420	240		277	293	201
Henrietta,	17,965	780		144	422	212
Jackson,	56,375	2,625		474	830	423
Leoni,	33,950	310		344	345	254
Liberty,	14,135	512		246	276	197
Napoleon,	23,450	3,210		358	476	155
Parma,	27,675	626		267	336	253
Pulaski,	12,830	491		182	325	243
Rives,	22,775	970	100	153	296	202
Sandstone,	22,000	1,510		227	388	252
Spring Arbor	25,500	2,790		308	509	287
Springport,	18,740	1,050		169	239	233
Tompkins,	11,422	1,125		142	308	235
Waterloo,	23,790	200		267	614	280
Total,	435,682	24,737	100	4,604	6,886	4,147

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JACKSON COUNTY.—Continued.

STOCK.				FLOURING MILLS.						
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested
476	5,758	730	--	1	2	25,000	----	2	2	$4,000 00
446	6,077	744	--	3	7	14,550	1	2	6	35,000 00
430	3,898	555	--	--	--	-------	----	---	--	----------
332	435	709	--	1	2	3,000	----	1	2	6,000 00
326	2,062	420	2	--	--	-------	----	---	--	----------
715	6,317	858	3	3	11	58,000	1	2	21	56,000 00
408	2,905	834	1	1	6	7,900	1	---	6	15,000 00
339	3,464	687	--	1	3	4,000	----	1	3	8,000 00
470	6,182	602	--	1	2	5,000	----	1	3	8,000 00
303	4,813	589	--	1	2	*	1	---	4	6,000 00
320	4,486	736	--	--	--	-------	----	---	--	----------
306	2,177	419	--	--	--	-------	----	---	--	----------
369	5,188	431	2	--	--	-------	----	---	--	----------
395	6,564	557	3	--	--	-------	----	---	--	----------
367	3,884	450	--	--	--	-------	----	---	--	----------
301	1,612	443	--	--	--	-------	----	---	--	----------
535	2,952	744	--	2	4	4,400	----	2	2	9,000 00
6,838	68,774	10,508	11	14	39	121,850	4	10	49	$147,000 00

* Not stated.

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JACKSON COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				No. of Persons employed.
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		
				Steam.	Water.	
Columbia,	$1,250 00	1	150,000		1	1
Concord,	87,000 00	2	275,000		2	3
Grass Lake,						
Hanover,	2,000 00					
Henrietta,		1	*		1	*
Jackson,	117,500 00	3	470,000	1	2	9
Leoni,	10,000 00					
Liberty,	3,000 00	1	150,000		1	1
Napoleon,	2,000 00	2	350,000		2	3
Parma,	*					
Pulaski,						
Rives,		2	125,000	1	1	*
Sandstone,		3	480,000	2	1	5
Spring Arbor		1	200,000		1	2
Springport,		1	*	1		4
Tompkins,		3	450,000	1	2	6
Waterloo,	*	2	150,000		2	2
Total,	$222,750 00	22	2,800,000	6	16	36

* Not stated.

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JACKSON COUNTY.—CONTINUED.

MILLS.		OIL MILLS			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of	No. of Barrels of Oil made the preceding year	No. of Barrels of Peppermint Oil manufactured the preceding year	No. of	No. of Barrels of Beer made the preceding year	No. of	No. of Gallons of Liquor made the preceding year
$1,000 00	$1,050 00	--	----	----	--	------	--	----------
1,200 00	1,200 00	--	----	----	--	------	--	----------
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*	*	--	----	----	--	------	--	----------
4,200 00	2,800 00	--	----	----	1	500	--	----------
----------	----------	--	----	----	--	------	--	----------
1,000 00	300 00	--	----	----	--	------	--	----------
2,000 00	1,050 00	--	----	----	--	------	--	----------
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350 00	800 00	--	----	----	--	------	--	----------
3,300 00	1,350 00	--	----	----	--	------	--	----------
3,000 00	900 00	--	----	----	--	------	--	----------
3,500 00	*	--	----	----	--	------	--	----------
3,500 00	3,050 00	--	----	----	--	------	--	----------
1,600 00	5,000 00	--	----	----	--	------	--	----------
$24,650 00	$17,500 00	--	----	----	1	500	--	----------

*Not stated.

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JACKSON COUNTY.—CONTINUED.

TOWNSHIPS.	DISTILLERIES. No. Gallons of Wine made the preceding year.	DISTILLERIES. No. of Barrels of Cider made the preceding year.	FISH. No. of Barrels caught the preceding year.	AGGREGATE OF ALL KINDS OF MANUFACTORIES. Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Columbia,	40	----	----	$1,600 00	4	$1,800 00
Concord,	------	----	----	---- ---- ----	----	----------
Grass Lake,	------	----	----	---- ---- ----	----	----------
Hanover,	------	----	----	---- ---- ----	----	----------
Henrietta,	------	----	----	---- ---- ----	----	----------
Jackson,	------	100	----	---- ---- ----	----	----------
Leoni,	------	----	----	---- ---- ----	----	----------
Liberty,	------	----	10	---- ---- ----	----	----------
Napoleon,	------	----	----	---- ---- ----	----	----------
Parma,	------	----	----	---- ---- ----	----	----------
Pulaski,	------	----	----	---- ---- ----	----	----------
Rives,	------	15	----	---- ---- ----	----	----------
Sandstone,	------	----	----	---- ---- ----	----	----------
Spring Arbor	------	----	----	---- ---- ----	----	----------
Springport,	------	----	----	---- ---- ----	----	----------
Tompkins,	------	----	----	---- ---- ----	----	----------
Waterloo.	------	----	----	---- ---- ----	----	----------
Total,	40	115	10	$1,600 00	4	$1,800 00

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JACKSON COUNTY.—CONTINUED.

MINES WORKED.						
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in pounds, produced the past year.	Aggregate valuation at place of Mining of Minerals produced the past year	No. of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
--	-----	-----	-----	----	-----	-----
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--	-----	-----	-----	----	-----	$7,000 00
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--	-----	-----	-----	----	-----	-----
--	-----	-----	-----	----	-----	$7,000 00

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KALAMAZOO COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Alamo,	57	40	65	109	32	3	..	.	120	25
Brady,	53	59	77	96	41	1	..	.	112	26
Cooper,	71	72	129	134	61	1	..	.	97	37
Comstock,	88	104	157	214	87	2	..	.	257	46
Climax,	54	46	106	121	41	..	..	.	123	37
Charleston,	64	71	147	138	65	4	..	.	171	318
Kalamazoo,	344	326	427	1,157	328	2	..	.	958	1,637
Oshtemo,	59	59	116	123	58	1	..	.	144	33
Pavillion,	45	41	93	100	36	2	..	.	96	225
Portage,	65	55	117	140	52	3	..	.	146	42
Prair' Ronde,	63	60	104	126	47	2	..	.	125	44
Richland,	83	71	121	209	64	2	..	.	196	352
Ross,	84	82	100	179	40	1	..	.	142	37
Schoolcraft,	95	88	193	212	81	3	..	.	221	72
Texas,	32	36	83	101	31	1	..	.	94	190
Wakeshma,	24	25	33	41	19	..	..	.	47	14
Total,	1,281	1,235	2,068	3,200	1,083	28	..	.	3,049	3,135

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KALAMAZOO COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Alamo,	53	30	45	98	38	----	120	10
Brady,	52	48	55	126	42	----	112	30
Cooper,	58	62	106	119	62	----	99	20
Comstock,	97	108	129	209	106	4	257	62
Climax,	65	54	71	127	42	----	126	43
Charleston,	62	53	91	134	82	7	172	257
Kalamazoo,	302	290	388	844	322	7	884	1,269
Oshtemo,	64	55	88	129	58	4	147	49
Pavillion,	44	28	52	83	39	6	90	147
Portage,	38	54	82	137	50	----	152	44
Prair' Ronde,	60	55	78	118	47	2	122	32
Richland,	66	60	99	178	78	4	198	287
Ross,	82	74	91	160	50	----	144	15
Schoolcraft,	71	81	135	238	88	2	228	94
Texas,	30	31	47	77	39	1	94	131
Wakeshma,	14	16	21	45	17	----	46	12
Total,	1,158	1,099	1,578	2,822	1,160	37	2,991	2,502

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KALAMAZOO COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
--	--	--	---	1	3	306	264	--	--	--	----	570
1	1	--	12	4	6	327	323	1	1	--	12	664
--	--	1	---	7	16	468	407	--	--	1	----	876
--	1	2	---	7	22	652	653	--	1	2	----	1,308
--	--	1	---	7	6	368	359	--	--	1	----	728
1	3	2	---	16	10	489	429	1	3	2	----	924
3	1	5	71	16	35	2,584	2,153	3	1	5	71	4,817
1	--	--	20	13	11	416	398	1	--	--	20	835
--	--	--	---	---	---	317	252	--	--	--	----	569
--	1	--	1	7	10	432	361	--	1	--	1	795
--	--	2	---	8	4	402	360	--	--	2	----	764
--	--	--	---	21	8	550	485	--	--	--	----	1,035
--	--	--	---	---	3	486	457	--	--	--	----	943
1	1	--	8	3	15	672	615	1	1	--	8	1,297
--	--	2	---	4	5	284	225	--	--	2	----	511
1	--	--	1	---	1	142	113	1	--	--	1	257
8	8	15	113	114	155	8,895	7,854	8	8	15	113	16,893

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KALAMAZOO COUNTY.—Continued.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year
Alamo,	22,657		3,386	739	453	13,360
Brady,	13,748		3,533	1,125	985	26,957
Cooper,	21,860	5	5,562	1,556	953	28,290
Comstock,	21,188	200	6,374	1,714	560	20,180
Climax,	22,770		3,582	1,454	789	15,750
Charleston,	15,240		8,220	2,492	1,219	26,665
Kalamazoo,	19,800	31	8,632	1,164	804	27,301
Oshtemo,	21,554		6,722	1,741	1,262	36,777
Pavillion,	12,246		4,011	1,279	653	20,480
Portage,	19,520		6,222	1,444	1,330	37,961
Prai'e Ronde,	22,880		7,313	2,126	1,643	73,825
Richland,	22,126	2	9,740	2,162	1,755	55,680
Ross,	13,231		4,243	1,317	473	11,270
Schoolcraft,	20,500		10,672	2,681	2,861	122,125
Texas,	21,960		6,409	1,760	1,471	43,060
Wakeshma,	5,838		415	101	106	4,060
Total,	297,118	238	95,036	24,855	17,317	563,741

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KALAMAZOO COUNTY.—CONTINUED.

PRODUCE.						
No. of Acres of Wheat harvested preceding year	No. of Bushels of Wheat raised the preceding year	No. of Bushels of all other kinds of Grain raised preceding year	No. of Bushels of Potatoes raised the preceding year	No. of Tons of Hay cut the preceding year	No. of Pounds of Wool sheared preceding year	No. of Pounds of Pork marketed the preceding year
582	8,468	2,454	4,920	489	593	14,487
1,146	14,702	1,722	4,591	853	3,437	37,355
1,213	19,499	6,015	6,787	862	5,296	27,732
1,077	19,532	5,554	6,831	1,085	7,462	97,600
1,225	19,642	8,106	5,049	1,102	14,961	9,418
1,854	23,522	7,377	5,400	1,493	12,613	27,520
1,243	25,680	22,715	3,020	560	8,050	212,600
1,448	22,205	9,625	7,873	759	14,852	34,223
938	12,541	2,404	4,694	622	3,549	10,895
1,513	25,049	4,593	7,833	1,354	9,596	32,905
1,791	40,340	18,732	5,929	754	7,853	76,683
1,693	35,361	23,741	7,796	2,021	30,034	132,988
1,182	13,776	1,780	9,396	697	2,812	7,701
2,577	53,043	9,770	6,710	1,008	12,060	115,845
1,300	19,931	5,753	6,362	224	4,112	34,572
98	520	393	2,015	84	330	2,525
20,880	353,811	130,734	95,206	13,967	137,610	875,049

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KALAMAZOO COUNTY.—Continued.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, 1 year old and over.	No. of Work Oxen.
Alamo,	2,220	150	950	111	189	111
Brady,	12,509	420	1,394	188	1,100	85
Cooper,	28,240	1,200	1,928	202	316	120
Comstock,	22,690	350	5,000	256	200	178
Climax,	14,350	4,100	7,635	218	264	109
Charleston,	24,'80	2,610	350	350	323	156
Kalamazoo,	18,200	300	150	1,038	644	116
Oshtemo,	18,265	778	3,175	213	237	111
Pavillion,	10,995	250	2,050	127	224	140
Portage,	15,920	2,140	600	280	278	110
Prai'e Ronde,	21,680	1,990	385	382	545	70
Richland,	31,565	2,142	.....	322	478	152
Ross,	11,235	.....	210	133	157	151
Schoolcraft,	34,525	1,600	.....	603	488	44
Texas,	14,278	934	100	218	235	82
Wakeshma,	2,900	200	3,461	27	85	143
Total,	283,652	19,164	27,388	4,668	5,763	1,878

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KALAMAZOO COUNTY.—CONTINUED.

STOCK.				FLOURING MILLS.						
							Power Used.			
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Steam.	Water.	No. of Persons employed.	Amount of Capital invested
176	757	373	--	--	--	-------	----	---	--	----------
201	1,389	536	--	--	--	-------	----	---	--	----------
332	1,907	769	--	--	--	-------	----	---	--	----------
460	2,336	573	--	3	6	8,000	----	3	7	$10,000 00
282	5,113	518	--	--	--	-------	----	---	--	----------
365	4,096	594	--	--	--	-------	----	---	--	----------
818	2,410	1,750	--	4	*	*	----	4	*	*
281	4,155	669	--	--	--	-------	----	---	--	----------
202	1,742	431	--	--	--	-------	----	---	--	----------
301	2,933	597	--	--	--	-------	----	---	--	----------
303	2,725	892	--	1	2	*	----	1	1	3,000 00
353	9,739	993	--	--	--	-------	----	---	--	----------
196	1,428	266	--	3	8	17,500	----	3	9	30,000 00
435	3,930	787	1	1	2	2,000	----	1	2	7,000 00
184	1,593	490	--	--	--	-------	----	---	--	----------
66	------	160	--	--	--	-------	----	---	--	----------
4,955	46,257	10,398	1	12	18	27,500	----	12	19	$50,000 00

*Not stated.

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KALAMAZOO COUNTY.—CONTINUED.

TOWNSHIPS.	Value of Products for the Past year.	SAW				
		No. of	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Alamo,						
Brady,		2	200,000		2	3
Cooper,		4	1,600,000	2	2	11
Comstock,	*	4	600,000	1	3	3
Climax,		2	550,000	2		5
Charleston,		1	300,000		1	3
Kalamazoo,	*	4	*	3	1	*
Oshtemo,		1	2,000,000	1		7
Pavillion,		2	350,000		2	3
Portage,		1	100,000		1	*
Prair' Ronde,	*	3	330,000	1	2	7
Richland,						
Ross,	$85,500 00	4	850,000		4	12
Schoolcraft,	*					
Texas,						
Wakeshma,		2	155,000		2	4
Total,	$85,500 00	30	7,035,000	10	20	58

*Not stated.

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KALAMAZOO COUNTY.—Continued.

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of Barrels of Oil made the preceding year.	No. of Barrels of Peppermint Oil manufactured the preceding year.	No. of—	No. of Barrels of Beer made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.
----------	----------	--	----	----	--	------	--	---- ----
$1,950 00	$1,050 00	--	----	----	--	------	--	---- ----
8,500 00	10,900 00	--	----	----	--	------	--	---- ----
3,000 00	1,500 00	--	----	----	--	------	--	---- ----
3,800 00	2,200 00	--	----	----	--	------	--	---- ----
1,600 00	*	--	----	----	--	------	--	---- ----
*	*	--	----	----	2	*	2	*
3,100 00	*	--	----	----	--	------	--	---- ----
700 00	*	--	----	----	--	------	--	---- ----
15,000 00	*	--	----	----	--	------	--	---- ----
5,000 00	1,320 00	--	----	----	--	------	1	70,400
----------	----------	--	----	----	--	------	--	---- ----
5,100 00	6,110 00	--	----	----	--	------	--	---- ----
----------	----------	--	----	----	--	------	--	---- ----
----------	----------	--	----	----	--	------	--	---- ----
2,200 00	*	--	----	----	--	------	--	---- ----
$49,950 00	$23,080 00	--	----	----	2	------	3	70,400

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KALAMAZOO COUNTY.—Continued.

TOWNSHIPS.	Distilleries.		Fish.	Aggregate of all kinds of Manufactories.		
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested.	No. of Persons employed.	Value of Products for the past year.
Alamo,						
Brady,						
Cooper,						
Comstock,						
Climax,						
Charleston,		12				
Kalamazoo,	*					
Oshtemo,						
Pavillion,						
Portage,						
Prair' Ronde,						
Richland,						
Ross,						
Schoolcraft,						
Texas,						
Wakeshma,						
Total,		12				

* Not stated.

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KALAMAZOO COUNTY.—Continued.

MINES WORKED.						
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in pounds, produced the past year.	Aggregate valuation at place of mining of minerals produced the past year.	No of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
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KENT COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Ada,	54	52	95	135	52	2	--	-	157	232
Algoma,	52	36	50	132	35	--	--	-	121	46
Alpine,	88	55	95	154	64	2	--	-	169	289
Bowne,	38	22	38	57	26	--	--	-	64	11
Byron,	75	50	85	105	38	3	--	-	112	33
Cannon,	76	85	115	148	48	--	1	-	150	323
Cascade,	39	40	63	100	42	1	--	-	104	38
Courtland,	73	61	71	124	45	5	--	-	138	34
Caledonia,	40	40	33	54	12	1	--	-	59	6
Gaines,	42	52	58	89	29	1	--	-	96	175
G. Rapids, c'y	344	246	369	1,010	168	3	--	-	873	1,080
G. Rapids, t'n	72	62	112	122	62	3	--	-	155	278
Grattan,	84	60	96	132	46	1	--	-	147	22
Lowell,	42	41	59	76	27	--	--	-	83	160
Oakfield,	47	50	80	120	32	1	--	-	117	213
Paris,	65	62	88	139	63	1	--	-	153	266
Plainfield,	70	65	113	139	43	--	--	-	145	285
Sparta,	47	34	59	111	34	--	--	-	110	35
Vergennes,	81	101	109	137	67	2	--	1	168	323
Walker,	60	60	87	143	52	--	--	-	142	52
Wyoming,	56	58	81	152	47	--	1	-	108	44
Total,	1,545	1,332	1,956	3,379	1,032	26	2	1	3,371	3,945

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KENT COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Ada,	57	52	73	122	52	----	155	201
Algoma,	47	32	54	92	38	1	121	14
Alpine,	81	54	71	136	58	1	174	227
Bowne,	27	27	46	52	23	1	64	9
Byron,	50	43	51	90	46	----	115	22
Cannon,	81	55	75	126	59	2	150	248
Cascade,	33	35	52	81	35	5	104	28
Courtland,	58	46	54	115	49	1	138	29
Caledonia,	20	23	15	53	9	1	59	7
Gaines,	39	44	44	72	35	1	96	139
G. Rapids, c'y	335	251	393	908	212	5	926	1,010
G. Rapids, t'n	68	74	93	136	66	----	153	285
Grattan,	66	66	72	127	50	----	144	24
Lowell,	51	42	37	78	19	----	84	145
Oakfield,	57	47	56	106	43	3	115	197
Paris,	63	45	53	130	59	3	153	199
Plainfield,	74	64	61	132	43	1	147	227
Sparta,	47	40	32	88	31	----	112	6
Vergennes,	113	89	129	148	62	3	170	369
Walker,	68	42	71	117	56	----	137	30
Wyoming,	87	56	66	141	41	2	119	22
Total,	1,522	1,227	1,598	3,050	1,086	30	3,436	3,438

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KENT COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
--	--	--	--	10	6	390	356	--	--	--	----	746
--	--	1	--	21	11	305	264	--	--	1	----	570
--	--	2	--	15	2	458	401	--	--	2	----	861
--	--	--	--	3	3	181	176	--	--	--	----	357
--	1	--	--	3	4	356	280	--	1	--	----	637
1	--	1	1	6	14	473	398	1	--	1	1	874
--	--	--	--	5	1	285	241	--	--	--	----	526
--	--	1	--	3	8	379	323	--	--	1	----	703
--	--	--	--	2	1	180	121	--	--	--	----	301
--	--	--	9	6	5	271	235	--	--	--	9	515
--	1	--	33	22	60	2,140	2,104	--	1	--	33	4,278
--	1	1	--	12	18	433	437	--	1	1	----	872
--	--	--	--	11	10	419	381	--	--	--	----	800
--	--	1	--	4	1	245	227	--	--	1	----	473
--	--	1	--	18	8	330	312	--	--	1	----	643
1	--	7	10	11	4	418	353	1	--	7	10	789
--	1	1	--	3	4	430	375	--	1	1	----	807
--	--	1	7	4	4	285	238	--	--	1	7	531
--	--	--	--	6	5	498	544	--	--	--	----	1,042
--	--	--	--	2	17	402	354	--	--	--	----	756
--	--	--	--	10	6	395	393	--	--	--	----	788
2	4	17	60	177	192	9,273	8,513	2	4	17	60	17,869

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KENT COUNTY.—Continued.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised preceding year
Ada,	19,892	------	4,996	1,104	764	12,147
Algoma,	9,807	------	1,006	246	206	3,747
Alpine,	19,001	5	3,859	684	490	11,606
Bowne,	7,428	------	2,069	444	260	6,510
Byron,	11,335	------	1,567	278	330	10,795
Cannon,	20,836	------	4,345	1,241	576	11,768
Cascade,	10,248	------	2,147	810	451	10,340
Courtland,	27,172	680	3,308	792	419	8,807
Caledonia,	3,445	------	518	201	152	2,880
Gaines,	10,613	------	2,125	575	320	6,090
G. Rapids, c'y	402	------	120	6	9	250
G. Rapids, t'n	22,359	------	3,760	701	574	12,883
Grattan,	15,584	------	4,893	1,437	486	10,630
Lowell,	5,961	------	1,239	418	273	6,275
Oakfield,	12,785	------	3,507	1,122	503	12,094
Paris,	14,654	------	3,920	682	581	14,345
Plainfield,	10,969	------	2,525	558	443	12,643
Sparta,	35,600	200	1,834	211	304	6,963
Vergennes,	14,577	------	6,113	1,612	708	18,345
Walker,	15,214	1	4,909	974	610	12,486
Wyoming,	20,331	------	3,294	387	518	16,124
Total,	308,213	886	62,054	14,483	8,977	207,728

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KENT COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year....	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.....	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.....	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
933	11,798	5,853	8,943	1,216	4,816	14,271
186	2,714	1,249	3,344	193	324	1,550
521	8,740	4,972	6,049	825	1,611	24,215
423	6,203	3,339	3,600	434	1,089	11,080
200	3,083	1,921	4,621	407	327	6,534
1,162	14,481	7,183	9,272	893	2,390	9,967
770	10,453	3,536	8,697	732	2,063	8,825
706	10,762	8,022	5,942	493	908	9,522
261	2,687	758	2,356	247	329	600
448	7,370	2,458	2,828	455	584	10,224
3	25	*	225	6	40	1,400
535	7,798	4,913	10,697	1,181	1,699	5,802
1,300	16,325	8,544	6,672	792	2,928	19,229
266	3,505	1,433	3,985	256	619	3,345
966	11,823	8,115	8,628	588	2,587	12,060
535	7,677	5,190	6,709	972	2,004	12,025
497	6,646	7,508	5,351	494	1,316	6,333
151	2,838	2,635	3,758	816	738	7,232
1,440	17,917	11,141	10,926	607	5,105	21,486
716	11,986	6,183	8,267	1,749	3,518	14,752
349	5,451	4,038	8,030	736	1,688	9,900
12,368	170,281	98,991	128,900	14,092	36,683	210,351

*Not stated.

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KENT COUNTY.—Continued.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Ada,	23,970	1,105	980	114	295	176
Algoma,	5,950	------	620	56	93	84
Alpine,	16,035	830	10,045	120	325	170
Bowne,	8,600	637	5,882	44	115	100
Byron,	7,845	300	15,760	44	140	97
Cannon,	16,878	100	----------	83	328	237
Cascade,	11.655	1,200	5,776	63	204	158
Courtland,	15,315	100	710	85	73	177
Caledonia,	2,040	400	3,245	17	54	59
Gaines,	12,409	270	18,390	55	121	94
G. Rapids, c'y	700	------	----------	284	266	------
G. Rapids, t'n	17,275	1,650	515	131	230	188
Grattan,	18,927	1,171	225	87	328	243
Lowell,	7,180	640	3,725	30	63	70
Oakfield,	14,235	1,543	80	87	139	207
Paris,	16,562	2,050	14,806	151	234	137
Plainfield,	11,348	261	106	111	173	147
Sparta,	13,535	300	18,530	70	182	108
Vergennes,	20,532	1,400	----------	174	344	145
Walker,	25,016	445	11,007	175	336	163
Wyoming,	9,400	400	3,760	121	135	137
Total,	275,407	14,802	114,362	2,102	4,178	2,897

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KENT COUNTY.—Continued.

STOCK.				FLOURING MILLS.						
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested
325	1,815	513	..	..	..	.....	.....	.....	..	.....
120	124	196	..	1	2	700	.....	1	2	$3,000 00
272	508	533	..	..	..	.....	.....	.....	..	.....
128	536	286	..	..	..	.....	.....	.....	..	.....
200	112	310	..	..	..	.....	.....	.....	..	.....
268	973	.....	..	2	4	2,700	.....	2	3	8,000 00
226	993	385	..	..	..	.....	.....	.....	..	.....
200	444	357	..	..	..	.....	.....	.....	..	.....
60	111	90	..	..	..	.....	.....	.....	..	.....
180	393	292	..	..	..	.....	.....	.....	..	.....
316	24	293	..	2	6	24,000	.....	2	10	10,000 00
274	629	362	..	..	..	.....	.....	.....	..	.....
291	1,327	509	..	1	2	2,000	.....	1	3	4,000 00
127	250	199	..	1	1	1,220	.....	1	2	1,500 00
186	1,031	495	..	..	..	.....	.....	.....	..	.....
273	799	397	..	..	..	.....	.....	.....	..	.....
145	575	313	..	..	..	.....	.....	.....	..	.....
197	316	402	..	..	..	.....	.....	.....	..	.....
302	2,123	.....	..	..	..	.....	.....	.....	..	.....
432	1,227	635	..	..	..	.....	.....	.....	..	.....
229	598	379	..	..	..	.....	.....	.....	..	.....
4,751	14,908	6,946	..	7	15	30,620	.....	7	20	$26,500 00

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KENT COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Ada,						
Algoma,	$4,000 00	6	3,700,000		6	38
Alpine,		6	*	1	5	27
Bowne,		1	300,000		1	2
Byron,						
Cannon,	16,000 00	2	350,000		2	4
Cascade,						
Courtland,						
Caledonia,		1	100,000		1	*
Gaines,		1	100,000		1	2
G. Rapids, c'y	122,000 00	5	4,000,000	1	4	48
G. Rapids, t'n						
Grattan,	800 00					
Lowell,	5,101 00	1	150,000		1	1
Oakfield,		2	640,000	1	1	2
Paris,						
Plainfield,		3	950,000	*	*	16
Sparta,		1	250,000		1	1
Vergennes,						
Walker,		3	400,000	1	2	18
Wyoming,		4	2,710,000		4	22
Total,	$147,901 00	36	13,650,000	4	29	181

* Not stated.

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KENT COUNTY.—Continued

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested	Value of Products for the past year.	No. of—	No. of Barrels of Oil made the preceding year.	No. of Barrels of Peppermint Oil manufactured the preceding year.	No. of—	No. of Barrels of Beer Made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.
$12,000 00	$21,700 00							
11,650 00	12,600 00							
1,000 00	1,500 00							
4,000 00	2,450 00							
*	*							
1,000 00	*							
24,500 00	49,000 00				1	700		
1,000 00	900 00							
4,300 00	4,240 00							
4,300 00	14,400 00							
1,500 00	1,700 00							
7,100 00	1,200 00							
8,000 00	18,460 00							
$80,350 00	$128,150 00				1	700		

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KENT COUNTY.—CONTINUED.

TOWNSHIPS.	DISTILLERIES.		FISH.	AGGREGATE OF ALL KINDS OF MANUFACTORIES.		
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year	No. of Barrels caught the preceding year	Amount of Capital invested	No. of Persons employed	Value of Products for the past year
Ada,						
Algoma,				$2,000 00	3	$2,000 00
Alpine,						
Bowne,						
Byron,						
Cannon,						
Cascade,						
Courtland,						
Caledonia,						
Gaines,						
G. Rapids, c'y				78,800 00	147	147,600 00
G. Rapids, t'n						
Grattan,						
Lowell,						
Oakfield,						
Paris,						
Plainfield,						
Sparta,						
Vergennes,						
Walker,						
Wyoming,				32,500 00	26	48,000 00
Total,				$113,300 00	176	$197,600 00

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KENT COUNTY.—Continued.

No. of—	Kind of Mineral.	MINES WORKED. Aggregate quantity of Mineral, in Pounds, produced the past year.	Aggregate valuation at place of mining of minerals produced the past year	No. of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
						$757,490 50
						6,300 00
						20,000 00
						$783,790 50

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LAPEER COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age	Over Five and under Ten	Over Ten and under Twenty one	Over Twenty-one and under Forty-five	Over Forty-five and under Seventy-five	Over 75 and under 90	Over Ninety and under 100	One Hundred and over	Married	Unmarried
Almont,	158	132	217	351	119	6			252	99
Attica,	71	59	99	141	47	4			138	54
Dryden,	114	121	170	198	90	3			214	43
Elba,	43	34	83	77	33	1			89	22
Hadley,	115	76	136	174	59	2			195	39
Imlay,	41	21	31	61	14				69	5
Lapeer,	277	160	275	356	130	1			366	735
Marathon,	39	34	36	83	16				73	29
Metamora,	90	76	112	173	57	1			183	48
Oregon,	39	29	44	54	20	2			70	7
Total,	987	742	1,203	1,668	585	20			1,649	1,081

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LAPEER COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Almont,	166	140	184	321	116	2	261	60
Attica,	61	52	69	122	47	3	138	28
Dryden,	109	102	136	202	88	2	248	39
Elba,	43	32	40	74	27	.....	90	14
Hadley,	80	68	84	170	63	.....	195	36
Imlay,	36	24	19	57	11	.....	63	4
Lapeer,	168	142	185	316	129	.....	363	577
Marathon,	23	22	21	64	20	.....	73	11
Metamora,	71	74	74	165	55	1	180	45
Oregon,	34	31	35	56	15	.....	69	3
Total,	791	691	843	1,547	571	8	1,680	817

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LAPEER COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year	Number of Deaths preceding year	No of Males	No. of Females	No. of Blind	No. of Deaf and Dumb	No. of Insane or Idiotic	No. of Colored Persons	TOTAL.
1	--	2	1	16	13	983	929	1	--	2	1	1,916
2	3	--	---	7	13	421	354	2	3	--	---	780
--	--	--	---	6	19	696	639	--	--	--	---	1,335
--	--	--	---	7	3	271	216	--	--	--	---	487
--	--	1	---	6	9	562	465	--	--	1	---	1,028
--	--	--	---	---	10	168	147	--	--	--	---	315
2	3	3	29	5	5	1,199	940	2	3	3	29	2,176
--	1	--	---	---	---	208	150	--	1	--	---	359
--	--	--	---	11	12	509	440	--	--	--	---	949
--	--	--	---	3	6	188	171	--	--	--	---	359
5	7	6	30	61	90	5,205	4,451	5	7	6	30	9,704

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LAPEER COUNTY.—Continued.

TOWNSHIPS.	LAND. Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year.
Almont,	17,932	------	7,778	1,841	1,037	33,120
Attica,	21,342	------	2,186	652	306	7,484
Dryden,	20,305	22	7,564	2,253	1,184	21,496
Elba,	20,828	------	2,584	845	382	5,800
Hadley,	19,714	40	5,664	1,468	583	11,247
Imlay,	16,574	20	535	123	90	2,337
Lapeer,	108,015	------	8,403	1,656	988	20,845
Marathon,	28,712	------	1,065	172	100	1,744
Metamora,	19,665	------	7,503	1,830	1,808	14,231
Oregon,	21,539	------	1,009	300	138	2,450
Total,	294,626	82	44,291	11,140	6,616	120,754

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LAPEER COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year	No. of Bushels of all other kinds of Grain raised the preceding year	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year
1,572	30,280	16,779	15,644	2,032	13,842	76,406
473	7,760	2,570	3,901	676	1,812	6,814
1,865	29,246	8,356	6,648	1,258	5,115	31,301
565	8,478	2,705	3,058	783	3,542	6,920
1,197	17,437	4,617	4,591	1,325	5,921	11,340
66	1,136	1,133	1,213	179	794	1,670
1,084	16,913	8,322	6,887	2,290	12,251	115,504
117	2,053	2,619	1,043	316	655	5,700
1,630	26,026	6,350	6,258	1,237	10,208	21,876
178	2,534	847	1,437	259	467	750
8,747	141,863	54,298	50,680	10,355	54,607	278,281

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LAPEER COUNTY.—Continued.

TOWNSHIPS	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the present year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Almont,	43,285	9,930	11,990	337	311	263
Attica,	16,187	560	8,164	87	129	128
Dryden,	25,166	3,645	4,535	301	336	253
Elba,	13,035	525	23,100	150	191	155
Hadley,	30,460	2,560	1,137	180	203	234
Imlay,	5,240	280	5,120	41	90	45
Lapeer,	31,144	2,520	6,746	259	457	228
Marathon,	------	------	2,010	44	85	69
Metamora,	22,350	1,428	1,522	237	338	256
Oregon,	5,800	------	1,530	40	62	60
Total,	192,667	21,448	65,854	1,676	2,202	1,691

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LAPEER COUNTY.—Continued.

STOCK.				FLOURING MILLS.						
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested
473	5,183	615	--	1	1	*	----	1	*	$1,500 00
213	739	400	--	--	--	-------	----	---	--	----------
435	2,592	801	2	--	--	-------	----	---	--	----------
170	1,427	271	--	--	--	-------	----	---	--	----------
374	2,796	491	--	1	2	2,000	----	1	1	1,500 00
78	148	126	--	--	--	-------	----	---	--	----------
560	4,554	861	--	2	4	11,000	1	1	4	10,000 00
69	204	147	--	--	--	-------	----	---	--	----------
360	2,247	541	--	1	3	1,500	----	1	2	5,000 00
92	189	143	--	1	2	500	----	1	1	2,000 00
2,824	20,079	4,396	2	6	12	15,000	1	5	8	$20,000 00

*Not stated.

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LAPEER COUNTY.—CONTINUED.

TOWNSHIPS.	Value of Products for the past year.	SAW MILLS. No. of—	No. of Feet of Lumber sawed the past year.	Power Used. Steam.	Water.	No. of Persons employed.
Almont,	*	1	100,000		1	1
Attica,		6	4,925,000	3	3	34
Dryden,		1	200,000		1	1
Elba,						
Hadley,	$1,200 00	4	310,000		4	4
Imlay,		3	3,095,000	2	*	46
Lapeer,	66,000 00	12	5,375,000	2	10	41
Marathon,		3	700,000	1	2	11
Metamora,	1,140 59					
Oregon,	500 00	2	400,000		2	5
Total,	$68,840 59	32	15,105,000	8	23	143

*Not stated.

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LAPEER COUNTY.—CONTINUED.

MILLS.		OIL MILLS			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of barrels of Oil made the preceding year	No. of Barrels of Peppermint Oil manufactured the preceding year	No. of—	No. of Barrels of Beer made the preceding year	No. of—	No. of Gallons of Liquor made the preceding year.
*	*							
$19,800 00	$29,675 00							
500 00	550 00							
1,300 00	1,000 00							
25,200 00	6,713 00							
18,700 00	37,800 00							
10,600 00	3,400 00							
1,000 00	2,400 00							
$77,100 00	$81,538 00							

*Not stated.

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LAPEER COUNTY.—Continued.

TOWNSHIPS.	Distilleries.		Fish.	Aggregate of all kinds of Manufactories.		
	No. Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year
Almont,						
Attica,						
Dryden,						
Elba,						
Hadley,				$1,600 00	10	$1,800 00
Imlay,						
Lapeer,						
Marathon,						
Metamora,				200 00	2	200 00
Oregon,						
Total,				$1,800 00	12	$2,000 00

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LAPEER COUNTY.—Continued.

MINES WORKED.						
No. of—	Kind of Mineral	Aggregate quantity of Mineral, in pounds, produced the past year	Aggregate valuation at place of Mining of Minerals produced the past year	No. of Persons employed	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale
						$43,300 00
						18,350 00
						$61,650 00

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LENAWEE COUNTY.

TOWNSHIPS.	NO. OF MALES.								
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Adrian, (city)	372	282	477	1,174	226	8	1	-	922	983
Adrian, (t'n)	99	105	152	214	92	4	-	-	231	62
Blissfield,	131	124	199	252	85	-	-	-	273	518
Cambridge,	88	77	114	161	70	2	-	-	173	57
Dover,	95	104	170	194	84	-	-	-	218	50
Fairfield,	103	99	200	248	86	6	-	-	274	69
Franklin,	97	93	184	164	100	4	-	-	207	58
Hudson,	166	151	238	366	124	4	-	-	385	-
Madison,	81	71	149	193	100	9	-	-	215	83
Medina,	123	148	181	244	124	5	1	-	322	47
Macon,	94	114	162	175	96	3	2	-	193	76
Ogden,	53	62	89	113	51	-	-	-	133	30
Palmyra,	93	97	189	203	88	3	-	-	233	60
Raisin,	93	74	175	226	101	7	-	-	251	83
Ridgeway,	54	64	79	116	48	5	-	-	135	32
Riga,	39	43	62	77	24	-	-	-	80	165
Rollin,	97	80	123	187	70	2	-	-	200	58
Rome,	103	122	137	214	104	6	-	-	169	45
Seneca,	146	102	173	262	80	8	-	-	287	59
Tecumseh,	216	212	379	578	221	6	-	-	549	1,063
Woodstock,	94	88	148	182	75	3	-	-	200	390
Total,	2,437	2,312	3,780	5,543	2,049	85	4	-	5,650	3,988

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LENAWEE COUNTY.—CONTINUED.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy five and over.	Married.	Unmarried.
Adrian,(city)	352	249	394	979	271	14	858	832
Adrian, (t'n)	85	90	120	225	128	2	255	99
Blissfield,	113	94	128	245	88	1	264	404
Cambridge,	61	68	76	173	73	3	177	62
Dover,	65	91	111	190	88	4	225	48
Fairfield,	101	108	152	235	105	10	275	81
Franklin,	82	78	147	175	110	6	205	65
Hudson,	136	125	176	325	119	2	375	----
Madison,	69	76	123	193	112	8	208	96
Medina,	114	124	140	256	123	3	316	48
Macon,	87	81	91	167	79	4	2	6
Ogden,	58	49	71	95	63	3	132	23
Palmyra,	97	93	112	194	106	2	238	66
Raisin,	79	108	135	225	112	9	248	108
Ridgeway,	55	41	64	121	43	1	135	30
Riga,	33	43	36	69	24	....	77	128
Rollin,	64	67	100	180	86	3	201	44
Rome,	98	116	161	226	116	11	172	55
Seneca,	129	99	131	263	86	....	287	51
Tecumseh,	190	198	301	572	235	11	544	963
Woodstock,	72	70	108	184	89	1	203	321
Total,	2,140	2,068	2,877	5,292	2,256	98	5,397	3,530

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LENAWEE COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
1	1	1	55	13	23	2,540	2,259	1	1	1	55	4,857
--	--	--	---	14	12	666	650	--	--	--	----	1,316
--	--	--	1	16	6	791	669	--	--	--	1	1,461
1	--	3	2	7	5	512	454	1	--	3	2	972
--	1	1	---	13	3	647	549	--	1	1	----	1,198
1	1	1	---	27	13	742	711	1	1	1	----	1,456
--	--	3	---	4	9	642	598	--	--	3	----	1,243
--	--	--	---	6	20	1,049	883	--	--	--	----	1,932
3	1	5	2	14	7	606	581	3	1	5	2	1,195
--	--	2	7	5	2	826	760	--	--	2	7	1,595
--	1	2	---	6	10	646	509	--	1	2	----	1,158
--	1	1	---	---	---	368	339	--	1	1	----	709
--	2	--	---	13	7	673	604	--	2	--	----	1,279
1	--	--	8	12	15	676	668	1	--	--	8	1,353
--	--	--	1	5	4	366	325	--	--	--	1	692
--	--	--	---	1	1	245	205	--	--	--	----	450
1	--	3	16	5	7	559	500	1	--	3	16	1,079
--	--	3	---	8	7	686	728	--	--	3	----	1,417
--	3	--	---	10	9	771	708	--	3	--	----	1,482
1	5	3	9	15	40	1,612	1,507	1	5	2	9	3,137
--	--	--	53	11	19	590	524	--	--	--	53	1,167
9	16	28	154	205	219	16,210	14,731	9	16	28	154	31,148

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LENAWEE COUNTY.—Continued.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year
Adrian, (city)	-------	-------	-------	-------	------	-------
Adrian, (t'n)	19,545	------	9,186	2,197	1,270	32,599
Blissfield,	9,146	------	5,409	935	1,216	24,442
Cambridge,	19,760	------	6,608	1,628	938	17,620
Dover,	21,045	79	9,791	1,821	1,039	24,127
Fairfield,	20,878	------	9,087	1,913	2,491	36,000
Franklin,	19,890	------	10,738	2,756	1,201	26,115
Hudson,	15,587	29	7,327	1,388	762	19,199
Madison,	17,461	------	9,403	1,712	1,267	35,750
Medina,	24,363	------	7,917	1,713	1,047	28,342
Macon,	15,748	------	2,024	1,671	1,004	26,532
Ogden,	11,075	------	3,445	591	612	5,439
Palmyra,	15,522	------	5,753	913	929	23,920
Raisin,	18,835	------	9,225	2,251	1,861	36,609
Ridgeway,	22,720	------	3,888	827	665	26,231
Riga,	3,602	------	601	105	143	3,809
Rollin,	15,395	------	5,730	1,517	804	12,544
Rome,	22,788	------	11,703	2,168	1,225	28,446
Seneca,	15,158	------	6,755	1,512	2,237	31,717
Tecumseh,	20,171	------	11,667	2,841	1,535	43,182
Woodstock,	17,360	105	7,039	2,165	990	13,730
Total,	346,352	208	143,296	32,624	23,236	501,353

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LENAWEE COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the precoding year.	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
2,002	29,770	11,076	12,036	2,817	26,552	65,536
597	11,430	3,330	9,788	1,198	3,678	47,235
1,497	19,777	3,440	5,208	2,365	17,988	28,088
1,474	22,755	7,884	8,917	2,254	13,347	43,143
1,667	25,232	6,873	9,189	3,093	9,781	71,811
2,142	34,811	4,890	6,963	2,199	20,822	48,366
1,274	21,228	4,192	5,520	1,467	6,847	22,805
1,453	20,687	5,819	12,468	1,602	11,801	48,024
1,840	26,631	3,905	7,242	2,490	10,100	40,338
1,753	32,535	6,157	4,023	1,516	11,532	74,054
500	7,610	2,556	3,929	1,137	1,420	19,250
771	11,109	4,157	10,427	1,393	7,708	17,809
2,178	33,056	7,853	16,689	2,238	15,204	139,496
778	13,417	5,148	4,841	913	2,611	46,423
39	532	502	1,191	165	73	450
1,229	19,748	2,701	5,336	1,127	9,100	33,289
1,507	25,484	11,280	5,985	2,493	22,438	56,045
1,347	20,819	3,322	6,792	2,308	8,377	36,695
2,693	49,712	9,892	11,599	2,540	17,801	95,055
1,512	19,759	3,946	7,138	1,886	7,184	28,575
28,253	446,102	108,923	155,281	38,706	224,363	962,487

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LENAWEE COUNTY.—Continued.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, 1 year old and over.	No. of Work Oxen.
Adrian, (city)	-------	------	------	138	3	2
Adrian, (t'n)	44,282	8,190	1,480	507	708	244
Blissfield,	18,375	4,015	500	599	432	182
Cambridge,	29,842	10,750	140	276	324	166
Dover,	31,296	7,015	3,183	418	634	155
Fairfield,	40,389	10,814	7,707	508	896	210
Franklin,	34,045	4,230	720	440	740	253
Hudson,	22,752	7,607	3,435	269	337	178
Madison,	7,341	1,788	455	423	474	124
Medina,	23,899	3,539	5,517	396	804	307
Macon,	42,358	4,716	1,087	356	733	211
Ogden,	22,125	2,515	2,850	224	411	130
Palmyra,	33,440	5,370	512	332	558	131
Raisin,	36,878	3,825	450	511	589	149
Ridgeway,	10,497	390	780	184	429	86
Riga,	3,920	125	570	59	60	63
Rollin,	23,052	695	918	256	279	162
Rome,	40,773	2,360	3,466	463	784	200
Seneca,	6,820	2,250	555	299	552	183
Tecumseh,	48,525	3,160	220	607	611	205
Woodstock,	29,960	595	------	254	520	220
Total,	550,569	83,749	34,545	7,519	10,878	3,561

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LENAWEE COUNTY.—CONTINUED.

STOCK.				FLOURING MILLS.						
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested
197	80	149	..	1	3	8,500	1	...	6	$6,000 00
621	7,433	833	2	4	11	24,500	*	*	10	37,000 00
407	1,294	760	..	1	2	*	....	1	2	4,000 00
398	5,756	902	..	..	..	.....	....	...	..	.....
598	5,291	531	..	..	..	.....	....	...	..	.....
681	4,245	1,149	..	..	..	.....	....	...	..	.....
530	7,721	857	..	..	..	.....	....	...	..	.....
441	2,954	724	..	1	*	*	1	*	*	*
462	4,092	597	..	..	..	.....	....	...	..	.....
563	3,290	938	..	2	7	5,200	....	2	3	9,000 00
476	4,614	706	..	..	..	.....	....	...	..	.....
283	579	538	..	..	..	.....	....	...	..	.....
424	1,821	512	..	..	..	.....	....	...	..	.....
554	5,492	897	..	1	4	7,284	....	1	4	10,000 00
260	853	394	..	..	..	.....	....	...	..	.....
91	29	196	..	..	..	.....	....	...	..	.....
349	3,638	600	..	2	5	10,500	½	1½	4	8,000 00
561	7,834	950	..	..	..	.....	....	...	..	.....
416	2,572	864	..	..	..	.....	....	...	..	.....
730	5,988	1,309	..	4	17	27,702	1	3	13	43,000 00
454	3,042	674	..	1	5	2,000	....	1	3	15,000 00
9,496	78,618	15,130	2	17	54	85,686	3½	9½	45	$132,000 00

* Not stated.

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LENAWEE COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				No. of Persons employed.
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		
				Steam.	Water.	
Adrian, (city)	$2,000 00	--	----	----	---	------
Adrian, (t'n)	8,700 00	5	625,000	*	*	10
Blissfield,	10,000 00	3	1,750,000	1	2	21
Cambridge,	----	2	500,000	----	2	4
Dover,	----	1	15,000	1	---	1
Fairfield,	----	3	700,000	2	1	7
Franklin,	----	2	330,000	----	2	3
Hudson,	*	--	----	----	---	------
Madison,	----	2	300,000	1	1	5
Medina,	36,400 00	5	840,000	1	4	7
Macon,	----	2	830,000	1	1	4
Ogden,	----	2	180,000	----	2	2
Palmyra,	----	2	1,500,000	1	1	11
Raisin,	40,000 00	2	650,000	1	1	5
Ridgeway,	----	2	800,000	2	---	8
Riga,	----	1	*	1	---	10
Rollin,	5,650 00	6	1,132,000	1	5	4
Rome,	----	3	1,000,000	2	1	10
Seneca,	----	4	850,000	2	2	6
Tecumseh,	168,912 00	5	959,720	----	5	7
Woodstock,	1,800 00	2	200,000	----	2	2
Total,	$273,462 00	54	13,161,720	17	32	127

*Not stated.

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LENAWEE COUNTY.—CONTINUED.

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of Barrels of Oil made the preceding year	No. of Barrels of Peppermint Oil manufactured the preceding year	No. of—	No. of Barrels of Beer made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.
$6,600 00	$1,975 00							
14,300 00	13,500 00							
3,500 00	1,500 00							
800 00	400 00							
4,700 00	5,080 00							
2,200 00	2,440 00							
2,800 00	800 00							
6,000 00	5,680 00							
2,550 00	*							
3,000 00	1,700 00							
7,000 00	11,500 00							
5,000 00	10,000 00							
4,000 00	4,000 00							
2,200 00	*							
3,800 00	3,406 00							
3,500 00	8,000 00							
3,500 00	2,100 00							
4,500 00	7,907 00							
800 00	685 00							
$78,050 00	$80,673 00							

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* Not stated.

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LENAWEE COUNTY.—Continued.

TOWNSHIPS.	Distilleries.		Fish.	Aggregate of all kinds of Manufactories.		
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Adrian, (city)	----	----	----	----	----	----
Adrian, (t'n)	----	----	----	----	----	----
Blissfield,	----	----	----	----	----	----
Cambridge,	----	----	----	----	----	----
Dover,	----	----	----	----	----	----
Fairfield,	----	----	----	----	----	----
Franklin,	----	----	----	----	----	----
Hudson,	----	----	----	----	----	----
Madison,	----	----	----	----	----	----
Medina,	----	----	----	----	----	----
Macon,	----	18	----	$1,200 00	9	$4,800 00
Ogden,	----	----	----	----	----	----
Palmyra,	----	----	----	500 00	2	1,500 00
Raisin,	----	----	----	----	----	----
Ridgeway,	----	----	----	----	----	----
Riga,	----	----	----	----	----	----
Rollin,	----	----	----	----	----	----
Rome,	----	----	----	----	----	----
Seneca,	----	----	----	----	----	----
Tecumseh,	----	----	----	132,700 00	158	313,022 00
Woodstock,	----	----	----	----	----	----
Total,	----	18	----	$134,400 00	169	$319,322 00

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LENAWEE COUNTY.—CONTINUED.

MINES WORKED.						
No. of	Kind of Mineral	Aggregate quantity of Mineral, in pounds, produced the past year.	Aggregate valuation at place of mining of minerals produced the past year.	No of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
						$13,000 00
						29,000 00
						2,000 00
						4,000 00
						190,066 00
						36,950 00
						$275,016 00

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LIVINGSTON COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Brighton,	73	73	139	177	64	1	..	.	181	58
Conway,	48	59	78	86	41	3	..	.	101	23
Deerfield,	74	78	138	129	54	..	..	.	150	34
Genoa,	53	73	106	104	63	1	..	.	130	39
Green Oak,	61	80	137	140	65	..	..	.	156	49
Hamburg,	70	73	121	153	65	3	..	.	153	67
Handy,	73	53	86	131	50	..	..	.	134	43
Hartland,	61	79	140	149	62	1	..	.	171	39
Howell,	107	104	128	237	73	3	..	.	229	72
Iosco,	48	39	97	113	35	4	..	.	121	214
Marion,	55	68	125	158	59	4	..	.	123	35
Osceola,	83	64	143	149	59	3	..	.	174	40
Putnam,	86	75	124	185	70	2	..	.	183	74
Tuscola,	53	62	82	112	32	3	..	.	111	35
Tyrone,	64	80	156	127	74	3	1	.	176	326
Unadilla,	61	72	136	125	83	2	..	.	167	43
Total,	1,070	1,132	1,936	2,275	949	33	1	.	2,460	1,191

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LIVINGSTON COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Brighton,	68	59	118	165	72	....	181	56
Conway,	56	44	56	85	40	1	102	5
Deerfield,	81	71	94	125	55	2	150	29
Genoa,	49	52	72	113	53	2	131	26
Green Oak,	64	48	81	147	68	3	158	61
Hamburg,	53	61	96	148	62	2	156	55
Handy,	53	82	79	136	44	....	133	44
Hartland,	68	63	91	152	72	1	169	16
Howell,	95	88	105	222	68	2	226	45
Iosco,	53	59	54	109	52	3	122	208
Marion,	82	63	95	143	59	1	108	35
Osceola,	87	68	85	144	63	2	177	33
Putnam,	84	77	107	164	81	3	185	64
Tuscola,	49	47	45	91	49	1	108	32
Tyrone,	79	63	113	137	68	3	177	284
Unadilla,	80	80	97	135	78	5	168	29
Total,	1,101	1,025	1,388	2,216	984	31	2,451	1,022

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LIVINGSTON COUNTY.—CONTINUED.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
--	1	3	1	8	11	527	482	--	1	3	1	1,014
--	--	--	1	7	8	315	282	--	--	--	1	598
--	--	--	--	19	18	473	428	--	--	--	----	901
--	--	--	---	4	3	400	341	--	--	--	----	741
--	--	--	---	7	5	483	411	--	--	--	----	894
--	--	--	---	2	10	485	422	--	--	--	----	907
--	--	1	1	5	8	393	394	--	--	1	1	789
2	--	1	---	2	6	492	447	2	--	1	----	942
--	--	2	---	---	8	652	580	--	--	2	----	1,234
--	1	--	---	4	8	336	330	--	1	--	----	667
--	2	--	---	8	5	469	443	--	2	--	----	914
2	--	1	---	14	18	501	449	2	--	1	----	953
3	2	3	6	9	18	542	516	3	2	3	6	1,072
--	--	1	---	4	12	344	282	--	--	1	----	627
--	--	--	---	17	12	505	463	--	--	--	----	968
--	--	--	10	11	10	479	475	--	--	--	10	964
7	6	12	19	121	160	7,396	6,745	7	6	12	19	14,185

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LIVINGSTON COUNTY.—Continued.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised preceding year
Brighton,	21,888	------	7,835	2,307	804	16,609
Conway,	8,687	722	3,056	956	441	10,429
Deerfield,	18,306	5	6,939	2,116	808	14,244
Genoa,	22,147	------	5,909	1,857	639	13,073
Green Oak,	21,548	------	8,321	2,555	893	17,737
Hamburg,	18,667	------	6,648	2,075	653	12,975
Handy,	11,710	------	3,066	559	336	9,869
Hartland,	21,720	------	7,266	2,109	651	11,222
Howell,	20,978	------	3,777	993	439	8,207
Iosco,	19,535	602	4,563	1,608	547	11,130
Marion,	18,593	------	7,537	2,354	831	18,118
Osceola,	22,493	------	7,649	2,026	625	11,549
Putnam,	21,523	160	8,341	2,503	729	12,640
Tuscola,	22,930	------	2,616	935	311	8,215
Tyrone,	21,392	------	7,002	1,901	751	13,294
Unadilla,	19,673	80	10,622	2,652	746	11,468
Total,	311,791	1,569	101,147	29,506	10,204	200,779

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LIVINGSTON COUNTY.—CONTINUED.

PRODUCE.						
No. of Acres of Wheat har vested preceding year....	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.....	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.....	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
1,621	26,495	4,018	10,754	1,640	8,435	16,494
689	9,808	4,252	4,796	917	2,618	12,775
2,091	24,490	7,186	8,878	1,902	8,061	28,703
1,599	20,724	4,783	8,352	1,651	6,762	7,757
2,262	36,595	2,502	12,114	1,566	15,998	26,455
1,883	28,720	2,145	7,687	1,468	8,096	21,850
414	7,587	2,698	4,242	893	1,634	3,127
1,750	24,363	2,497	8,075	1,646	6,965	17,481
632	7,275	3,162	4,234	653	3,448	3,040
1,615	19,558	3,241	4,661	1,710	4,566	4,744
1,934	27,366	3,594	7,881	1,848	6,960	25,848
1,580	21,310	6,961	7,263	1,769	7,967	15,352
2,359	36,661	2,244	6,582	1,864	8,515	6,035
873	10,823	3,312	4,976	947	2,063	9,600
1,527	21,305	7,616	6,912	2,057	6,549	19,635
2,363	37,352	3,813	7,126	2,671	9,957	13,550
25,192	360,425	64,024	114,533	25,202	108,594	232,446

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LIVINGSTON COUNTY.—Continued.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Brighton,	18,290	2,505	80	249	330	200
Conway,	12,315	1,365	5,223	109	284	161
Greenfield,	23,475	1,105	155	242	561	280
Genoa,	15,284	1,464		170	316	201
Green Oak,	19,095	960		253	404	218
Hamburg,	18,680			211	376	175
Handy,	12,975	740	6,000	89	276	161
Hartland,	28,975	545	200	172	372	275
Howell,	10,406	300	390	113	156	180
Iosco,	22,575	2,280	1,240	140	307	190
Marion,	23,201	2,170		202	233	293
Osceola,	18,970	650	20	189	443	287
Putnam,	19,620	1,395	50	242	340	162
Tuscola,	7,125	210	250	86	174	155
Tyrone,	30,995	2,093		196	490	263
Unadilla,	26,015	3,120		270	327	223
Total,	307,896	20,902	13,608	2,933	5,389	3,430

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LIVINGSTON COUNTY.—Continued.

STOCK.				FLOURING MILLS.						
				No. of—			Power Used.			
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	Runs of Stone.		No. of Barrels of Flour made the preceding year.	Steam.	Water.	No. of Persons employed.	Amount of Capital invested.
353	3,355	485	3	2	5	11,000	.....	2	5	$15,000 00
236	1,103	368	..	..	..	.....	.....	..	..	.....
400	3,149	638	..	..	..	.....	.....	..	..	.....
310	2,659	485	..	..	..	.....	.....	..	..	.....
342	5,367	540	..	1	2	.....	.....	1	..	3,000 00
350	3,481	395	..	4	6	4,300	.....	4	4	13,000 00
262	532	383	..	..	..	.....	.....	..	..	.....
384	2,814	509	..	2	5	3,800	.....	2	4	8,000 00
233	1,549	365	..	2	3	7,000	.....	2	4	15,000 00
305	1,041	406	..	..	..	.....	.....	..	..	.....
370	2,881	620	..	..	..	.....	.....	..	..	.....
407	3,412	565	..	..	..	.....	.....	..	..	.....
363	3,395	566	..	2	6	4,293	.....	2	3	10,000 00
231	778	291	..	1	2	1,000	.....	1	1	4,000 00
427	2,574	585	..	..	..	.....	.....	..	..	.....
455	4,027	572	..	1	..	.....	.....	1	1	3,000 00
5,433	42,917	7,779	3	15	29	31,393	.....	15	22	$71,000 00

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LIVINGSTON COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Brighton,	$66,000 00	3	230,000		3	3
Conway,						
Deerfield,		1	75,000		1	1
Genoa,		1	125,000		1	1
Green Oak,		1	75,000		1	
Hamburg,	2,975 00	2	195,000		2	2
Handy,		2	900,000	2		7
Hartland,	21,000 00	2	225,000		2	2
Howell,		4	600,000	1	3	10
Iosco,		2		2		7
Marion,		1	115,000		1	1
Osceola,		1	50,000		1	1
Putnam,	23,760 00	2	230,000		2	3
Tuscola,	600 00	1	150,000		1	1
Tyrone,		2	100,000		2	1
Unadilla,		1	100,000		1	
Total,	$146,510 00	26	3,170,000	5	21	40

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LIVINGSTON COUNTY.—CONTINUED.

MILLS.		OIL MILLS			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of Barrels of Oil made the preceding year	No. of Barrels of Peppermint Oil manufactured the preceding year	No. of—	No. of Barrels of Beer made the preceding year	No. of—	No. of Gallons of Liquor made the preceding year
$3,000 00	$850 00	--	----	----	--	------	--	---- ----
---- ----	---- ----	--	----	----	--	------	--	---- ----
1,000 00	450 00	--	----	----	--	------	--	---- ----
600 00	750 00	--	----	----	--	------	--	---- ----
600 00	225 00	--	----	----	--	------	--	---- ----
900 00	680 00	--	----	----	--	------	1	5,600
5,000 00	7,200 00	--	----	----	--	------	--	---- ----
1,400 00	1,525 00	--	----	----	--	------	--	---- ----
8,000 00	---- ----	--	----	----	--	------	--	---- ----
4,100 00	2,270 00	--	----	----	--	------	--	---- ----
400 00	403 00	--	----	----	--	------	--	---- ----
500 00	100 00	--	----	----	--	------	--	---- ----
1,100 00	1,800 00	--	----	----	--	------	--	---- ----
300 00	150 00	--	----	----	--	------	--	---- ----
1,200 00	350 00	--	----	----	--	------	--	---- ----
---- ----	---- ----	--	----	----	--	------	--	---- ----
$28,100 00	$16,753 00	--	----	----	--	------	1	5,600

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LIVINGSTON COUNTY.—CONTINUED.

TOWNSHIPS.	DISTILLERIES.		FISH.	AGGREGATE OF ALL KINDS OF MANUFACTORIES.		
	No. Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested.	No. of Persons employed.	Value of Products for the past year.
Brighton,						
Conway,						
Greenfield,						
Genoa,						
Green Oak,						
Hamburg,	40			$600 00	1	$200 00
Handy,						
Hartland,						
Howell,						
Iosco,						
Marion,						
Osceola,						
Putnam,						
Tuscola,						
Tyrone,	40					
Unadilla,						
Total,	80			$600 00	1	$200 00

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LIVINGSTON COUNTY.—CONTINUED.

No. of—	Kind of Mineral.	MINES WORKED. Aggregate quantity of Mineral in pounds, produced the past year.	Aggregate valuation at Place of Mining of Minerals produced the past year.	No. of Persons employed.	Amount of Capital invested.	Value of all Merchandize imported the preceding year for the purpose of sale.
						$81,000 00
						41,160 00
						$122,160 00

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MACOMB COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Armada,	77	96	176	216	81	2	..	.	197	79
Bruce,	121	99	195	270	96	10	2	.	281	98
Chesterfield,	123	149	212	274	92	5	..	.	288	566
Clinton,	219	206	292	395	134	5	1	.	405	126
Erin,	152	134	147	164	94	2	..	.	223	37
Harrison,	51	54	59	84	28	..	..	.	78	30
Lenox,	83	87	130	157	54	2	..	.	166	45
Macomb,	87	86	140	147	82	7	..	.	186	366
Richmond,	110	97	160	211	65	10	..	.	238	60
Ray,	103	104	196	207	93	4	..	.	251	55
Shelby,	106	102	210	231	102	6	..	.	159	63
Sterling,	69	78	140	145	76	2	..	.	166	344
Washington,	90	89	160	240	106	6	..	.	251	100
Warren,	92	84	108	154	88	2	..	.	181	338
Total,	1,483	1,465	2,325	2,895	1,191	63	3	.	3,070	2,307

*MACKINAC COUNTY.

Holmes,	97	45	96	233	60	5	1	.	200	338
Inverness,	21	19	24	97	12	..	..	.	36	143
St. Ignace,	27	32	52	44	21	1	..	.	45	131
Total,	145	96	172	374	93	6	1	.	281	512

*Two towns not reported.

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MACOMB COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Armada,	195	115	151	214	86	2	220	77
Bruce,	90	10	149	274	119	12	280	116
Chesterfield,	145	126	122	268	86	6	289	464
Clinton,	199	193	254	411	146	4	422	136
Erin,	99	103	115	157	77	....	227	3
Harrison,	42	43	37	68	31	....	76	13
Lenox,	68	89	87	135	52	....	171	15
Macomb,	65	72	114	155	86	3	193	304
Richmond,	89	95	108	219	82	8	237	73
Ray,	98	91	118	208	113	5	258	74
Shelby,	101	104	149	248	108	3	187	62
Sterling,	59	66	111	151	77	3	180	287
Washington,	111	74	93	242	115	8	263	108
Warren,	91	87	71	123	89	....	177	289
Total,	1,452	1,268	1,679	2,873	1,272	54	3,180	2,021

MACKINAC COUNTY.—Continued.

Holmes,	108	68	72	186	43	....	189	287
Inverness,	19	11	19	46	4	....	35	14
St. Ignace,	41	33	31	48	19	4	47	129
Total,	168	112	122	280	66	4	271	430

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MACOMB COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year	Number of Deaths preceding year	No of Males	No. of Females	No. of Blind	No. of Deaf and Dumb	No. of Insane or Idiotic	No. of Colored Persons	TOTAL.
2	1	1	- - -	- - -	6	648	763	2	1	1	- - -	1,415
- -	1	1	4	7	9	793	654	- -	1	1	4	1,453
- -	- -	- -	4	12	7	855	753	- -	- -	- -	4	1,612
- -	1	10	20	24	23	1,252	1,207	- -	1	10	20	2,490
1	1	1	- - -	1	2	693	551	1	1	1	- - -	1,247
- -	1	- -	1	2	5	276	221	- -	1	- -	1	499
- -	- -	2	- - -	12	2	513	431	- -	- -	2	- - -	946
- -	- -	- -	- - -	2	13	549	495	- -	- -	- -	- - -	1,044
- -	- -	1	8	6	4	653	601	- -	- -	1	8	1,263
3	6	- -	1	21	16	707	638	3	6	- -	1	1,355
- -	1	1	1	16	10	757	713	- -	1	1	1	1,473
- -	- -	3	- - -	5	14	510	467	- -	- -	3	- - -	980
1	- -	5	5	16	6	691	643	1	- -	- -	5	1,340
1	2	- -	- - -	6	8	528	461	1	2	5	- - -	997
8	14	25	44	130	125	9,425	8,598	8	14	25	44	18,114

MACKINAC COUNTY.—Continued.

- -	- -	- -	3	5	13	537	477	- -	- -	- -	3	1,017
- -	- -	- -	- - -	- - -	- - -	173	99	- -	- -	- -	- - -	272
2	- -	1	- - -	3	4	177	176	2	- -	1	- - -	356
2	- -	1	3	8	17	887	752	2	- -	1	3	1,645

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MACOMB COUNTY.—Continued.

TOWNSHIPS.	LAND. Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year
Armada,	19,558	------	7,250	1,077	1,046	29,700
Bruce,	21,695	1	13,123	3,110	5,665	29,423
Chesterfield,	10,088	------	4,163	706	429	7,895
Clinton,	11,100	------	4,546	738	421	11,504
Erin,	14,574	------	2,734	290	246	5,104
Harrison,	8,686	------	2278	517	145	4,444
Lenox,	12,747	------	3,676	481	391	9,217
Macomb,	14,078	------	4,157	749	499	13,079
Richmond,	17,520	320	5,674	725	716	19,275
Ray,	21,790	3	5,669	965	897	91,815
Shelby,	22,106	------	11,915	2,011	1,449	36,470
Sterling,	16,916	------	6,000	661	700	12,470
Washington,	19,946	------	12,045	2,058	1,187	26,140
Warren,	14,523	------	2,185	138	273	4,937
Total,	225,327	324	85,415	14,226	14,064	229,473

MACKINAC COUNTY.—Continued.

Holmes,	1,928	------	137	40	------	------
Inverness,	263	------	52	------	------	------
St. Ignace,	3,390	------	405	------	------	------
Total,	5,581	------	594	40	------	------

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MACOMB COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year	No. of Bushels of all other kinds of Grain raised the preceding year	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork manufactured the preceding year
1,121	19,920	27,926	10,221	2,420	21,339	55,017
5,786	49,159	20,041	11,512	2,532	27,461	189,437
537	9,265	7,938	7,102	1,625	4,432	10,738
548	8,732	8,578	9,024	1,228	5,715	23,057
239	3,890	9,596	7,106	653	835	1,900
414	7,580	6,006	3,083	585	1,486	1,770
346	5,337	6,090	5,194	1,052	2,131	12,930
578	8,024	7,249	7,279	1,248	4,502	16,679
490	8,140	14,990	7,972	1,223	5,651	38,603
841	11,925	12,862	9,123	2,081	11,161	49,154
1,917	25,724	13,813	18,570	1,541	26,123	49,557
611	7,875	10,009	6,563	1,354	8,725	21,194
2,706	33,281	11,862	12,573	2,070	30,399	58,153
169	1,813	6,634	4,970	710	1,992	5,660
16,303	200,665	163,594	120,292	20,322	151,952	533,849

MACKINAC COUNTY.—Continued.

.....	.....	215	1,320	95	.....	.....
.....	.....	362	1,200	7	.....	.....
.....	.....	142	1,276	51	.....	.....
.....	.....	719	3,796	153	.....	.....

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MACOMB COUNTY.—Continued.

TOWNSHIPS	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year	No. of Pounds of Sugar manufactured the present year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Armada,	39,474	5,944	6,986	390	518	217
Bruce,	43,682	6,265	100	517	587	233
Chesterfield,	28,590	1,440	270	268	373	135
Clinton,	23,228	1,914	360	338	355	158
Erin,	8,957	------	-----	293	202	85
Harrison,	7,685	-----	-----	215	193	95
Lenox,	23,666	1,910	450	187	382	174
Macomb,	30,065	1,510	499	227	385	125
Richmond,	29,006	3,505	1,572	311	420	200
Ray,	32,110	3,790	4,700	420	371	138
Shelby,	40,330	1,960	480	431	401	207
Sterling,	21,205	580	936	200	353	152
Washington,	31,135	5,855	600	446	393	139
Warren,	12,349	40	697	261	322	63
Total,	371,682	34,713	17,650	4,504	5,255	2,121

MACKINAC COUNTY.—Continued.

Holmes,	------	-----	4,920	36	3	6
Inverness,	350	------	1,600	6	4	22
St. Ignace,	300	------	10,650	34	22	------
Total,	650	------	17,170	76	29	28

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MACOMB COUNTY.—Continued.

STOCK.				FLOURING MILLS.					
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested
544	6,225	938	..	..	..	.....	....	....	..	.....
508	9,821	809	..	..	..	.....	....	....	..	.....
349	1,688	483	..	..	..	.....	....	....	..	.....
406	1,767	605	..	2	5	4,040	1	1	4	$14,000 00
316	352	618	..	..	..	.....	....	....	..	.....
181	465	281	..	..	..	.....	....	....	..	.....
370	1,229	567	..	..	..	.....	....	....	..	.....
388	2,022	512	..	1	2	100	....	1	2	300 00
466	2,134	640	..	..	..	.....	....	....	..	.....
613	4,613	764	..	3	7	10,200	....	3	7	18,000 00
555	3,795	671	..	1	3	1,500	....	1	2	5,000 00
379	5,256	379	..	1	3	2,000	....	1	2	5,000 00
431	9,487	472	..	1	3	7,000	*	*	*	*
367	887	520	..	..	..	.....	....	....	..	.....
5,873	52,197	8,259	..	9	23	24,840	1	7	17	$42,300 00

MACKINAC COUNTY.—Continued.

47	.....	22	1	..	..	.....	....	....	..	.....
11	.....	8	..	..	..	.....	....	....	..	.....
28	.....	6	1	..	..	.....	....	....	..	.....
86	.....	36	2	..	..	.....	....	....	..	.....

*Not stated.

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MACOMB COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW			
		No. of—	No. of Feet of Lumber sewed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Armada,		5	516,000		5	6
Bruce,		1	70,000	1		*
Chesterfield,		2	2,288,000	*	*	38
Clinton,	$20,320 00	2	850,000	2		29
Erin,		1	800,000	1		8
Harrison,		2		2		
Lenox,		2	2,200,000	2		13
Macomb,	1,500 00	3	1,040,000	2	1	11
Richmond,		2	1,300,000	1	1	11
Ray,	3,280 00	4	1,240,000	1	3	11
Shelby,	12,000 00	2	745,000	1	1	6
Sterling,	*	5	1,150,000	2	3	13
Washington,	*	1	500,000	1		8
Warren,						
Total,	$37,100 00	32	12,699,000	16	14	155

MACKINAC COUNTY.—Continued.

Holmes,						
Inverness,		2	2,350,000	1	1	30
St. Ignace,						
Total,		2	2,350,000	1	1	30

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MACOMB COUNTY.—CONTINUED

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested.	Value of Products for the past year.	No. of—	No. of Barrels of Oil made the preceding year.	No. of Barrels of Peppermint Oil manufactured the preceding year.	No. of—	No. of Barrels of Beer Made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.
$1,800 00	*	--	----	----	--	------	--	---- ----
300 00	*	--	----	----	--	------	--	---- ----
28,000 00	$37,728 00	--	----	----	--	------	--	---- ----
8,300 00	6,880 00	--	----	----	--	------	--	---- ----
2,000 00	7,000 00	--	----	----	--	------	--	---- ----
---- ----	---- ----	--	----	----	--	------	--	---- ----
8,000 00	13,200 00	--	----	----	--	------	--	---- ----
7,250 00	4,850 00	--	----	----	--	------	--	---- ----
8,000 00	8,000 00	--	----	----	--	------	--	---- ----
4,800 00	3,340 00	--	----	----	--	------	--	---- ----
2,100 00	5,170 00	--	----	----	--	------	--	---- ----
4,600 00	5,000 00	--	----	----	--	------	1	88,000
6,000 00	*	--	----	----	--	------	--	---- ----
---- ----	---- ----	--	----	----	--	------	--	---- ----
$81,150 00	$91,168 00	--	----	----	--	------	1	88,000

*Not stated.

MACKINAC COUNTY.—CONTINUED.

---- ----	---- ----	--	----	----	--	------	--	---- ----
$6,000 00	$16,800 00	--	----	----	--	------	--	---- ----
---- ----	---- ----	--	----	----	--	------	--	---- ----
$6,000 00	$16,800 00	--	----	----	--	------	--	---- ----

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MACOMB COUNTY.—Continued.

TOWNSHIPS.	Distilleries. No. of Gallons of Wine made the preceding year.	Distilleries. No. of Barrels of Cider made the preceding year.	Fish. No. of Barrels caught the preceding year.	Aggregate of all kinds of Manufactories. Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Armada,	20	43	----	----------	----	----------
Bruce,	------	----	----	$9,500 00	15	$9,200 00
Chesterfield,	22	----	----	----------	----	----------
Clinton,	------	----	----	16,650 00	49	18,015 00
Erin,	------	----	----	----------	----	----------
Harrison,	------	----	----	----------	----	----------
Lenox,	------	----	----	----------	----	----------
Macomb,	------	----	----	----------	----	----------
Richmond,	------	----	----	1,600 00	4	3,000 00
Ray,	8	69	----	500 00	4	1,400 00
Shelby,	------	40	----	----------	----	----------
Sterling,	------	1	215	----------	----	----------
Washington,	------	60	----	10,000 00	15	15,000 00
Warren,	------	----	----	----------	----	----------
Total,	50	203	215	$38,250 00	87	$46,615 00

MACKINAC COUNTY.—Continued.

Holmes,	----	----	16,486	----------	----	----------
Inverness,	----	----	390	$1,400 00	12	$4,500 00
St. Ignace,	----	----	2,135	----------	----	----------
Total,	----	----	19,011	$1,400 00	12	$4,500 00

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MACOMB COUNTY.—Continued.

MINES WORKED.						
No. of—	Kind of Mineral	Aggregate quantity of Mineral, in Pounds, produced the past year	Aggregate valuation at place of mining of minerals produced the past year	No. of Persons employed	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale
						$10,000 00
						74,960 00
						12,000 00
						400 00
						37,964 00
						700 00
						97,000 00
						$233,024 00

MACKINAC COUNTY.—Continued.

						$6,800 00
						$6,300 00

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MONROE COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Ash,	139	118	234	217	92	3	1	-	227	3
Bedford,	78	74	140	124	79	2	-	-	-	-
Dundee,	139	146	204	277	106	12	2	-	301	63
Erie,	112	91	163	166	61	7	-	-	191	42
Exeter,	66	41	92	79	44	1	-	-	91	34
Frenchtown,	149	125	197	202	102	2	1	-	228	51
Ida,	43	45	58	63	25	-	-	-	74	14
Lasalle,	108	85	169	180	76	1	-	-	189	430
London,	61	58	96	130	69	1	-	-	147	54
Milan,	102	52	100	143	60	8	2	-	165	38
Monroe,	85	83	147	134	64	5	-	-	154	46
" c'y 1st w'd	159	118	196	325	72	5	2	-	250	72
" c'y 2d w'd	137	102	144	248	52	4	-	-	223	89
" c'y 3d w'd	37	38	78	114	37	4	-	-	91	44
Raisinville,	107	79	141	189	60	2	-	-	180	71
Summerfield	68	54	85	113	46	2	-	-	10	-
Whiteford,	79	63	93	152	49	2	-	-	162	41
Total,	1,669	1,372	2,337	2,856	1 094	61	8	-	2,683	1,092

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MONROE COUNTY.—CONTINUED.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Ash,	134	103	178	205	113	1	242	------
Bedford,	84	66	107	147	76	5	------	------
Dundee,	130	117	146	240	111	3	299	52
Erie,	134	101	114	173	66	----	191	48
Exeter,	46	47	79	75	42	2	91	24
Frenchtown,	94	120	142	192	93	3	226	42
Ida,	38	34	42	70	33	----	73	32
Lasalle,	104	99	112	152	85	13	187	377
London,	62	53	62	119	70	2	148	44
Milan,	72	54	76	140	55	2	165	26
Monroe,	79	59	78	136	78	6	157	51
" c'y 1st w'd	182	108	196	394	90	5	275	107
" c'y 2d w'd	113	90	130	252	67	6	228	128
" c'y 3d w'd	44	51	76	113	42	4	82	85
Raisinville,	83	80	99	159	71	1	179	50
Summerfield,	56	46	60	103	35	----	10	------
Whiteford,	67	67	87	121	59	2	162	28
Total,	1,522	1,295	1,784	2,791	1,186	55	2,715	1,094

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MONROE COUNTY.—CONTINUED.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
3	--	--	---	4	19	804	734	3	--	--	---	1,541
--	--	--	---	---	---	497	485	--	--	--	---	982
--	3	1	---	22	30	886	747	--	3	1	---	1,637
--	--	1	---	19	23	600	588	--	--	1	---	1,189
--	--	1	1	4	5	323	291	--	--	1	1	616
--	1	1	8	2	15	778	644	--	--	1	8	1,432
--	--	--	---	5	2	234	217	--	--	--	---	451
--	--	--	---	10	7	619	565	--	--	--	---	1,184
2	--	4	---	9	4	415	368	2	--	4	---	789
--	--	--	5	11	4	467	399	--	--	--	5	871
1	--	--	1	11	19	518	436	1	--	--	1	956
--	5	2	12	2	1	877	975	--	5	2	12	1,871
--	--	3	28	---	---	687	658	--	--	3	28	1,376
--	1	--	3	5	7	308	330	--	1	--	3	642
1	--	--	---	2	---	578	493	1	--	--	---	1,072
--	1	--	---	---	6	368	300	--	1	--	---	669
1	--	--	2	17	16	438	403	1	--	--	2	844
8	11	13	60	123	158	9,397	8,633	8	11	13	60	18,122

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MONROE COUNTY.—Continued.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year
Ash,	20,986		4,389	1,123	425	1,976
Bedford,	11,297		5,724	928	847	17,485
Dundee,	28,725		5,685	1,332	1,041	23,213
Erie,	13,239		6,676	1,969	859	15,311
Exeter,	22,719	320	1,814	616	744	6,408
Frenchtown,	15,113		5,494	1,388	870	10,994
Ida,	23,040		2,108	386	391	7,344
Lasalle,	12,820		6,446	1,773	1,142	21,483
London,	22,014		2,500	349	414	7,389
Milan,	10,550	911	3,801	540	508	13,195
Monroe,	10,234	170	4,449	1,386	684	11,902
" c'y 1st w'd	43		43		6	155
" c'y 2d w'd	82		82	8	12	590
" c'y 3d w'd	743		700	180	78	2,523
Raisinville,	25,296		5,851	1,208	856	17,251
Summerfield,	7,224		1,772	241	367	14,216
Whiteford	25,140		3,191	520	501	8,000
Total,	249,265	1,401	60,775	13,947	9,745	179,435

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MONROE COUNTY.—CONTINUED.

PRODUCE.						
No. of Acres of Wheat harvested preceding year....	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.....	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.....	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
867	11,437	3,582	5,034	1,484	3,369	1,874
914	11,748	4,104	11,837	1,273	4,499	13,449
968	12,970	4,393	7,403	2,015	3,894	56,712
1,751	24,806	10,036	2,674	1,195	9,319	13,752
539	6,695	1,786	5,098	1,139	2,203	7,767
2,477	14,[illegible]82	3,844	6,740	1,804	9,277	2,659
360	4,446	2,807	2,938	732	2,805	7,958
1,851	21,938	8,047	6,184	1,623	6,161	15,494
239	2,776	2,550	7,168	1,375	2,345	4,081
519	6,597	2,953	4,371	1,337	2,455	19,390
1,167	17,367	7,854	5,630	1,221	5,220	10,437
.....	.....	.....	50	35	.....	425
.....	235	475	460	37	.....	.....
134	2,427	335	686	242	2,354	1,115
866	12,475	5,995	4,593	6,385	7,631	19,822
431	6,089	3,394	6,194	1,039	2,330	13,038
475	6,389	1,757	526	836	1,149	6,540
13,558	163,077	63,912	77,586	23,772	63,011	194,513

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MONROE COUNTY.—Continued.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, 1 year old and over.	No. of Work Oxen.
Ash,	21,116	950	324	520	592	207
Bedford,	20,291	180		341	541	148
Dundee,	42,890	14,560	6,062	331	841	229
Erie,	9,625	315		476	506	148
Exeter,	14,485	392	670	216	450	148
Frenchtown,	10,805	520		433	697	310
Ida,	8,450			129	305	100
Lasalle,	16,856	850		455	566	156
London,	21,530	4,885	1,081	162	508	148
Milan,	30,905	21,780	3,377	165	474	108
Monroe,	16,015	845		338	233	148
" c'y 1st w'd				61	10	14
" c'y 2d w'd	12,788			97	6	2
" c'y 3d w'd	5,919			86	55	15
Raisinville,	20,085	600		330	531	171
Summerfield	18,300	1,890		175	299	82
Whiteford,	19,672	300	105	135	336	100
Total,	289,732	48,067	11,619	4,500	6,950	2,234

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MONROE COUNTY.—CONTINUED.

STOCK.				FLOURING MILLS.						
							Power Used.			
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Steam.	Water.	No. of Persons employed.	Amount of Capital invested.
518	1,241	1,023	..	1	2	140	1	...	4	$2,400 00
439	1,815	648	..	..	..	.....	....	...	..	.....
593	1,363	797	..	1	3	1,500	....	1	2	8,000 00
160	3,217	967	..	1	1	1,000	1	...	2	3,000 00
329	700	457	1	..	..	.....	....	...	..	.....
520	2,186	950	..	1	2	*	....	1	..	*
215	877	291	..	..	..	.....	....	...	..	.....
473	2,469	1,012	..	..	..	.....	....	...	..	.....
328	992	342	2	..	..	.....	....	...	..	.....
339	1,428	549	..	1	2	*	....	1	2	1,500 00
329	2,436	415	..	..	..	.....	....	...	..	.....
134	18	76	..	1	4	*	....	1	3	6,000 00
114	18	54	..	1	4	15,000	....	1	6	6,000 00
110	983	103	..	..	..	.....	....	...	..	.....
423	2,374	552	..	..	..	.....	....	...	..	.....
234	594	425	..	..	..	.....	....	...	..	.....
291	650	641	..	..	..	.....	....	...	..	.....
5,549	23,361	9,302	3	7	18	17,640	2	5	19	26,900 00

*Not stated.

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MONROE COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Ash,	$980 00	3	280,000	2	1	14
Bedford,		3	205,000		3	3
Dundee,	7,500 00	4	530,000	1	3	11
Erie,	3,000 00	1	40,000	1		2
Exeter,						
Frenchtown,	*	2	50,000	1	1	*
Ida,						
Lasalle,		4	310,000		4	11
London,		2	450,000	1	1	2
Milan,	1,000 00	4	1,200,000	2	2	8
Monroe,		2	719,800		2	6
" c'y 1st w'd	*	1	*		1	2
" c'y 2d w'd	10,000 00	1	500,000	1		5
" c'y 3d w'd						
Raisinville,		1	500,000		1	5
Summerfield		1	1,000,000		1	10
Whiteford,		2	288,000	2		9
Total,	$22,480 00	31	6,072,000	11	20	88

*Not stated.

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MONROE COUNTY.—CONTINUED.

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested.	Value of Products for the past year.	No. of—	No. of Barrels of Oil made the preceding year.	No. of Barrels of Peppermint Oil manufactured the preceding year.	No. of—	No. of Barrels of Beer made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.
$7,800 00	$3,130 00	--	----	----	--	-------	--	---- ----
7,000 00	1,640 00	--	----	----	--	-------	--	---- ----
5,900 00	11,900 00	--	----	----	--	-------	--	---- ----
500 00	1,600 00	--	----	----	--	-------	--	---- ----
---- ----	---- ----	--	----	----	--	-------	--	---- ----
*	*	--	----	----	--	-------	--	---- ----
---- ----	---- ----	--	----	----	--	-------	--	---- ----
3,500 00	2,480 00	--	----	----	--	-------	--	---- ----
1,800 00	2,900 00	--	----	----	--	-------	--	---- ----
8,000 00	4,000 00	--	----	----	--	-------	--	---- ----
6,000 00	*	--	----	----	3	1,800	--	---- ----
3,000 00	*	--	----	----	--	-------	--	---- ----
3,000 00	4,000 00	--	----	----	1	80	--	---- ----
---- ----	---- ----	--	----	----	--	-------	--	---- ----
5,000 00	*	--	----	----	--	-------	--	---- ----
6,000 00	5,000 00	--	----	----	--	-------	--	---- ----
5,000 00	2,300 00	--	----	----	--	-------	--	---- ----
$62,500 00	$38,950 00	--	----	----	4	1,880	--	---- ----

*Not stated.

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MONROE COUNTY.—Continued.

TOWNSHIPS.	Distilleries.		Fish.	Aggregate of all kinds of Manufactories.		
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Ash,						
Bedford,						
Dundee,						
Erie,						
Exeter,						
Frenchtown,						
Ida,						
Lasalle,						
London,						
Milan,						
Monroe,		550				
" c'y 1st w'd				$13,000 00	25	$13,000 00
" c'y 2d w'd			350	81,500 00	71	113,800 00
" c'y 3d w'd						
Raisinville,						
Summerfield						
Whiteford,				200 00	3	400 00
Total,		550	350	$94,700 00	99	$127,200 00

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MONROE COUNTY.—Continued.

MINES WORKED.						
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in pounds, produced the past year.	Aggregate valuation at place of mining of minerals produced the past year.	No of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
						$4,200 00
						17,500 00
						13,500 00
						226,050 00
						70,500 00
						12,000 00
						$343,750 00

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MONTCALM COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Bloomer,	18	18	41	48	18	--	--	-	52	14
Bushnell,	21	14	39	55	19	1	--	-	62	11
Eureka,	85	70	82	138	49	1	--	-	153	26
Fairplain,	29	25	49	69	23	2	--	-	67	128
Montcalm,	27	12	54	117	24	2	--	-	72	86
Total,	180	139	263	427	133	6	--	-	406	265

NEWAYGO COUNTY.

Big Prairie,	22	25	20	39	11	--	--	-	40	10
Brighton,	9	9	15	78	4	--	--	-	28	54
Brooks,	21	11	24	109	20	--	--	-	53	76
Newaygo,	33	34	32	64	12	--	--	-	60	13
Total,	85	79	91	290	47	--	--	-	181	153

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MONTCALM COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Bloomer,	30	23	28	42	16	....	51	3
Bushnell,	25	20	26	49	23	....	62	11
Eureka,	56	51	64	128	43	....	165	7
Fairplain,	14	27	31	50	19	1	63	79
Montcalm,	16	19	38	49	18	2	54	12
Total,	141	140	187	318	119	3	395	117

NEWAYGO COUNTY.—Continued.

Big Prairie,	13	14	19	32	9	....	41	2
Brighton,	8	7	12	22	2	....	20	5
Brooks,	27	22	14	43	10	....	45	5
Newaygo,	24	26	23	50	9	....	26	.....
Total,	72	69	68	147	30	....	132	12

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OF MICHIGAN, MAY, 1854

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
..	..	..	...	4	4	143	139	..	..	..	...	282
..	1	..	...	...	1	149	143	..	1	..	...	293
..	..	..	...	6	13	425	342	..	..	..	...	767
..	..	..	...	2	6	195	142	..	..	..	...	337
..	..	3	...	3	2	236	142	..	..	3	...	381
..	1	3	...	15	36	1,148	908	..	1	3	...	2,060

NEWAYGO COUNTY.—CONTINUED.

..	..	..	...	4	3	117	87	..	..	..	..	...	204
..	..	..	...	...	...	115	51	..	..	..	..	...	166
..	1	..	...	2	2	185	116	..	..	1	..	...	302
..	..	..	...	1	2	175	132	..	..	..	..	...	307
..	1	..		7	7	592	386	..	..	1	..	...	979

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MONTCALM COUNTY.—CONTINUED.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised preceding year
Bloomer,	35,996	------	231	95	72	1,276
Bushnell,	22,764	80	727	345	108	2,213
Eureka,	9,717	------	3,023	839	389	8,103
Fairplain,	23,819	------	1,347	327	260	4,922
Montcalm,	36,617	------	649	183	153	3,087
Total,	128,913	80	5,977	1,789	982	19,601

NEWAYGO COUNTY.—CONTINUED.

Big Prairie,	19,220	------	2,023	337	246	2,539
Brighton,	25,236	------	150	-------	4	145
Brooks,	22,750	10,000	100	-------	14	360
Newaygo,	1,824	80	785	-------	201	2,100
Total,	69,030	10,080	3,058	337	465	5,144

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MONTCALM COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
46	727	164	1,330	1	-------	-------
223	2,877	1,826	1,534	56	142	1,375
803	8,243	5,394	4,994	248	1,554	12,140
352	3,461	4,116	3,373	93	290	3,910
170	1,842	654	1,805	------	164	800
1,594	17,150	12,154	13,036	398	2,150	18,225

NEWAYGO COUNTY.—Continued.

441	3,112	236	892	------	152	3,200
-------	-------	-------	550	------	-------	-------
3	45	100	555	28	-------	-------
150	1,289	495	645	52	15	-------
594	4,446	831	2,642	80	167	3,200

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MONTCALM COUNTY.—CONTINUED.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Bloomer,	2,120	28	7,943	7	47	50
Bushnell,	4,692	10	6,151	9	49	80
Eureka,	4,220	------	150	80	152	166
Fairplain,	4,400	50	----------	48	83	76
Montcalm,	1,865	------	2	22	7	74
Total,	17,297	88	14,246	166	338	446

NEWAYGO COUNTY.—CONTINUED.

Big Prairie,	----------	------	----------	41	11	43
Brighton,	----------	------	200	17	12	34
Brooks,	1,430	100	600	19	9	49
Newaygo,	260	------	----------	19	12	20
Total,	1,690	100	800	96	44	146

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MONTCALM COUNTY.—Continued.

STOCK.				FLOURING MILLS.					
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—		No. of Barrels of Flour made the preceding year.	Power Used.		No. of Persons employed.	Amount of Capital invested.
				No. Runs of Stone.			Steam.	Water.		
61	.....	100	..	..	..	..	..	..	..	.....
89	98	105	..	..	..	..	..	..	..	.....
147	644	247	..	..	1	*	....	1	2	*
85	178	167	..	..	..	.....	....	..	..	.....
59	94	123	..	..	..	.....	....	..	..	.....
441	1,014	742	..	..	1	.....	....	1	2	.....

*Not stated.

NEWAYGO COUNTY.—Continued.

31	41	27	..	..	..	.....	....	..	..	.....
14	.....	42	..	..	..	.....	....	..	..	.....
38	.....	80	..	1	2	25	....	1	1	$1,000 00
22	.....	33	..	1	1	160	....	*	1	500 00
105	41	182	..	2	3	125	....	1	2	$1,500 00

* Not stated.

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MONTCALM COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				No. of Persons employed.
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		
				Steam.	Water.	
Bloomer,	----------	--	----------	----	---	------
Bushnell,	----------	1	300,000	----	1	4
Eureka,	$3,000 00	4	800,000	----	4	16
Fairplain,	----------	3	600,000	----	3	8
Montcalm,	----------	5	5,300,000	----	5	67
Total,	$3,000 00	13	7,000,000	----	13	95

NEWAYGO COUNTY.—Continued.

Big Prairie,	----------	--	----------	----	---	------
Brighton,	----------	4	3,600,000	4	---	60
Brooks,	$200 00	3	1,740,000	----	3	82
Newaygo,	*	--	----------	----	---	------
Total,	$200 00	7	5,340,000	4	3	142

*Not stated.

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MONTCALM COUNTY.—Continued.

MILLS.		OIL MILLS			BREWERIES			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of barrels of Oil made the preceding year	No. of Barrels of Peppermint Oil manufactured the preceding year	No. of—	No. of Barrels of Beer made the preceding year	No. of—	No. of Gallons of Liquor made the preceding year.
$1,500 00	$2,000 00							
4,500 00	6,000 00							
7,000 00	*							
23,500 00	38,800 00							
$36,500 00	$46,800 00							

*Not stated.

NEWAYGO COUNTY.—Continued.

$43,000 00	*							
56,300 00	$14,690 00							
$99,300 00	$14,690 00							

*Not stated.

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MONTCALM COUNTY.—CONTINUED.

TOWNSHIPS.	DISTILLERIES. No. Gallons of Wine made the preceding year.	DISTILLERIES. No. of Barrels of Cider made the preceding year	FISH. No. of Barrels caught the preceding year.	AGGREGATE OF ALL KINDS OF MANUFACTORIES. Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Bloomer,						
Bushnell,						
Eureka,				$800 00	4	$1,000 00
Fairplain,						
Montcalm,						
Total,				$800 00	4	$1,000 00

NEWAYGO COUNTY.—CONTINUED.

Big Prairie,						
Brighton,						
Brooks,			75			
Newaygo,						
Total,			75			

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MONTCALM COUNTY.—Continued.

MINES WORKED.						
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in pounds, produced the past year.	Aggregate valuation at place of Mining of Minerals produced the past year.	No. of Persons employed.	Amount of Capital invested.	Value of all Merchandize imported the preceding year for the purpose of sale.
						$30,500 00
						$30,500 00

NEWAYGO COUNTY.—Continued.

						$13,600 00
						$13,600 00

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OAKLAND COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Avon,	105	94	217	260	101	8	-	-	264	106
Addison,	77	70	107	144	61	4	-	-	-----	-----
Bloomfield,	126	113	220	241	122	3	-	-	287	79
Brandon,	87	70	119	167	72	2	-	-	201	41
Commerce,	80	81	137	188	96	10	-	-	208	374
Farmington,	112	116	212	278	120	9	-	-	194	84
Groveland,	84	80	137	159	78	4	-	-	188	55
Highland,	62	66	130	133	68	1	-	-	162	39
Holly,	66	68	129	144	52	1	-	-	162	34
Indep'dence,	129	100	168	203	105	3	-	-	239	461
Lyon,	95	88	146	196	88	6	-	-	217	402
Millford,	120	101	188	221	85	3	-	-	162	59
Novi,	72	83	170	197	95	2	1	-	232	56
Oakland,	92	67	160	153	74	2	-	-	180	49
Oxford,	72	95	133	172	76	4	-	-	130	44
Orion,	121	110	146	206	68	5	-	-	199	64
Pontiac,	262	271	396	641	207	8	-	-	397	237
Rose,	92	74	109	173	59	5	-	-	181	330
Royal Oak,	80	71	148	150	88	3	-	-	197	44
Southfield,	118	103	174	205	112	11	-	-	246	91
Springfield,	92	80	143	150	80	1	-	-	178	368
Troy,	86	101	169	234	130	5	-	-	248	57
Waterford,	77	112	165	218	75	4	-	-	195	108
White Lake,	69	55	103	163	54	2	-	-	121	42
W. Bloomfi'd	87	72	145	151	79	5	-	-	173	63
Total,	2,463	2,341	4,071	5,147	2,245	111	1	-	5,161	3,287

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OAKLAND COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Avon,	108	101	169	246	121	1	272	93
Addison,	60	66	91	135	57	3	------	------
Bloomfield,	119	121	152	251	127	4	285	89
Brandon,	73	79	96	163	78	3	199	46
Commerce,	72	32	119	196	113	8	215	377
Farmington,	120	100	156	297	150	11	193	104
Groveland,	76	69	103	146	90	4	187	55
Highland,	60	78	81	139	72	2	162	54
Holly,	82	73	88	129	63	1	165	34
Indep'dence,	74	99	114	182	106	1	239	349
Lyon,	79	68	134	180	92	3	217	339
Milford,	117	110	147	233	109	4	176	57
Novi,	94	93	127	202	98	1	226	16
Oakland,	72	78	103	149	91	3	182	60
Oxford,	73	81	105	167	74	2	132	35
Orion,	81	94	113	169	87	4	206	54
Pontiac,	250	260	336	681	243	9	580	264
Rose,	36	84	100	156	61	1	183	253
Royal Oak,	84	88	99	162	99	6	197	73
Southfield,	97	107	155	216	128	11	249	94
Springfield,	86	79	104	143	80	2	181	312
Troy,	86	86	126	236	150	17	237	96
Waterford,	86	77	106	188	90	4	205	80
White Lake,	74	79	91	146	68	1	110	36
W. Bloomfi'd	72	64	101	170	90	----	116	80
Total,	2,231	2,306	3,116	5,082	2,537	106	5,174	3,070

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OAKLAND COUNTY.—CONTINUED.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
--	1	--	1	12	9	785	746	--	1	--	1	1,533
--	--	--	--	--	--	463	412	--	--	--	--	875
--	2	1	--	--	12	825	774	--	2	1	--	1,602
1	--	--	--	13	6	517	492	1	--	--	--	1,010
1	1	4	--	17	11	592	590	1	1	4	--	1,188
1	1	1	2	16	10	847	834	1	1	1	2	1,686
--	--	2	--	11	9	542	488	--	--	2	--	1,032
--	1	--	--	6	7	460	432	--	1	--	--	893
--	--	--	--	4	7	460	436	--	--	--	--	896
--	--	--	--	4	14	708	576	--	--	--	--	1,284
--	2	--	--	5	10	619	556	--	2	--	--	1,177
--	--	1	1	13	24	718	720	--	--	1	1	1,440
--	--	--	--	--	--	620	605	--	--	--	--	1,225
--	--	2	--	3	8	548	496	--	--	2	--	1,046
--	--	--	1	15	9	552	509	--	--	--	1	1,055
1	--	--	5	--	--	656	548	1	--	--	5	1,210
1	--	2	30	24	43	1,785	1,779	1	--	2	30	3,597
--	--	1	--	2	1	512	438	--	--	1	--	951
1	--	1	26	18	23	540	538	1	--	1	26	1,106
--	--	1	--	20	20	723	714	--	--	1	--	1,438
--	--	--	--	8	13	546	494	--	--	--	--	1,040
3	--	2	9	19	4	725	701	3	--	2	9	1,440
1	--	8	1	18	16	651	551	1	--	8	1	1,212
--	--	1	--	10	14	446	459	--	--	1	--	906
--	2	4	--	11	12	539	497	--	2	4	--	1,042
10	10	31	76	249	281	16,389	15,378	10	10	31	76	31,884

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OAKLAND COUNTY.—Continued.

TOWNSHIPS.	LAND. Whole No. of Acres taxable	LAND. No. of Acres owned by individuals or companies, not taxable	LAND. No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year.
Avon,	18,884	------	9,799	2,627	1,190	40,627
Addison,	21,815	------	5,032	2,396	628	7,877
Bloomfield,	18,948	------	9,645	2,350	1,139	28,427
Brandon,	18,698	39	7,953	2,088	809	13,014
Commerce,	19,095	1,586	10,035	2,983	1,312	17,347
Farmington,	22,995	------	12,343	2,442	1,476	40,200
Groveland,	19,959	160	7,492	1,382	479	13,075
Highland,	21,987	5	9,312	2,497	976	15,480
Holly,	22,739	------	5,920	1,752	715	9,811
Indep'dence,	19,841	------	8,710	2,767	1,195	20,555
Lyon,	21,205	------	10,416	2,611	1,147	25,365
Milford,	22,397	------	10,001	2,505	838	14,155
Novi,	13,611	------	10,432	2,450	768	27,132
Oakland,	21,780	------	10,612	3,436	1,138	33,498
Oxford,	21,938	------	12,032	2,845	1,156	16,153
Orion,	16,220	------	8,897	2,865	1,018	16,100
Pontiac,	20,916	12	11,213	2,735	696	26,491
Rose,	13,798	------	5,653	1,855	629	8,796
Royal Oak,	22,530	------	4,868	530	781	8,956
Southfield,	20,916	------	8,858	1,497	1,089	17,817
Springfield,	19,169	------	8,604	2,503	844	13,230
Troy,	20,811	------	1,861	1,244	1,213	28,561
Waterford,	17,598	------	8,039	2,491	806	10,373
White Lake,	13,374	------	6,748	2,114	647	9,918
W. Bloomfi'd	17,996	------	9,253	2,293	912	15,738
Total,	489,225	1,802	213,728	57,258	23,801	478,696

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OAKLAND COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year	No. of Bushels of all other kinds of Grain raised the preceding year	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork manufactured the preceding year
2,484	42,168	8,664	15,763	1,889	27,945	49,242
1,907	25,905	3,057	3,247	965	7,189	11,450
2,303	41,067	10,237	12,647	2,365	19,691	39,290
1,857	25,544	3,749	6,540	1,593	5,946	15,493
2,720	44,299	2,561	14,984	1,417	11,538	27,465
1,909	38,038	9,907	13,780	2,514	35,904	117,300
1,035	23,234	4,662	8,473	1,694	10,264	3,150
2,304	33,181	3,519	10,130	938	8,475	14,390
1,532	22,324	4,474	6,049	2,130	9,052	13,289
2,577	37,493	8,363	9,882	1,838	9,013	36,365
2,173	41,581	2,739	7,937	1,703	15,988	55,362
2,348	36,467	4,707	18,633	1,445	12,161	32,325
2,104	43,754	5,082	7,386	1,398	17,409	42,050
2,943	45,478	7,917	7,927	1,990	15,382	58,552
2,226	28,276	6,929	5,038	1,256	9,716	23,087
2,038	30,283	5,437	12,305	1,614	8,725	21,766
2,158	36,181	27,964	16,632	3,493	17,405	10,550
1,569	22,295	3,185	5,826	1,719	7,304	6,801
483	7,482	11,203	7,127	1,230	9,205	21,774
1,046	17,617	14,932	13,461	1,709	21,096	77,533
1,994	33,020	5,222	8,244	1,589	8,813	12,470
1,263	23,420	18,608	8,420	2,212	36,919	5,5787
1,960	10,734	3,423	9,032	1,373	13,505	13,468
1,975	26,350	2,218	6,307	1,150	8,158	13,142
2,067	23,853	3,602	9,408	1,323	19,226	23,810
49,175	779,044	184,361	244,178	42,551	356,107	795,911

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OAKLAND COUNTY.—Continued.

TOWNSHIPS	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the present year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Avon,	31,370	3,675		458	451	151
Addison,	10,619			264	343	207
Bloomfield,	35,178	1,555	210	399	388	226
Brandon,	26,180	470		232	471	262
Commerce,	34,692	894		345	480	157
Farmington,	49,030	32,140	3,590	478	337	250
Groveland,	22,745	420	40	269	379	241
Highland,	16,695	914		188	299	216
Holly,	24,198	382	100	194	243	263
Indep'dence,	26,525		450	303	350	272
Lyon,	32,075	2,150	2,300	372	481	164
Milford,	25,185	844		322	429	178
Novi,	30,740	2,530	7,400	380	284	212
Oakland,	28,585	1,100	100	440	482	204
Oxford,	24,045	1,665		324	472	211
Orion,	19,572	589	3	322	364	203
Pontiac,	54,419	4,615		591	413	291
Rose,	17,910	1,822		176	363	215
Royal Oak,	26,306	1,890	350	325	410	130
Southfield,	61,044	4,210	1,369	471	542	189
Springfield,	30,335	1,260		256	263	219
Troy,	39,065	8,495	850	528	616	192
Waterford,	24,335	951		359	322	161
White Lake,	30,100	655		171	218	198
W. Bloomfi'd	26,715	1,880	260	306	250	190
Total,	747,664	73,506	17,022	8,073	9,650	5,212

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OAKLAND COUNTY.—Continued

STOCK.				FLOURING MILLS.						
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested
451	9,204	694								
301	3,339	415		1	2	3,000		1	2	$8,000 00
503	7,368	630		2	4	6,200		2	4	16,000 00
427	2,772	501								
400	4,798	649		2	4	9,000		2	4	50,000 00
727	12,058	828		3	6	7,000		3	4	10,500 00
405	3,967	528								
340	3,541	570								
361	3,681	469		1	2	2,000		1	2	3,000 00
526	3,790	735		1	4	6,411		1	2	3,000 00
430	6,279	638								
463	4,840	636		3	8	9,829		3	7	19,500 00
522	6,550	583								
451	5,931	705		1	2	*	*	*	1	2,000 00
413	3,647	593								
361	2,952	497	3	*	*	6,000	*	1	7	27,125 00
837	6,276	865		5	17	27,500	1	4	14	41,500 00
358	2,984	500								
516	3,469	596								
741	8,486	783		4	9	11,700	1	3	4	21,400 00
395	3,243	511	1							
699	11,983	598								
424	4,256	444		2	6	11,000		2	5	11,000 00
328	2,974	398	3							
462	6,894	492	1							
11,831	135,283	14,878	8	25	64	99,640	2	23	56	$218,025 00

* Not stated.

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OAKLAND COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Avon,						8
Addison,	*	4	449,000		4	1
Bloomfield,	$37,000 00	1	200,000		1	2
Brandon,		2	300,000		2	6
Commerce,	45,000 00	3	490,000	1	2	7
Farmington,	40,000 00	7	590,000		7	3
Groveland,		1	500,000	1		2
Highland,		1	150,000		1	1
Holly,	6,000 00	1	60,000		1	1
Indep'dence,	40,400 00	2	250,000		2	9
Lyon,		3	440,000	3		2
Milford,	60,000 00	2	170,000		2	
Novi,						
Oakland,	2,000 00	1	50,000		*	
Oxford,						
Orion,	*	2	2,600,000		2	22
Pontiac,	131,000 00	5	416,000		5	7
Rose,						
Royal Oak,		1	50,000	1		4
Southfield,	59,000 00	4	325,000		4	4
Springfield,						
Troy,		3		3		9
Waterford,	20,000 00	2	200,000		2	4
White Lake,		1	100,000		1	1
W. Bloomfi'd						
Total,	$440,400 00	46	5,340,000	9	36	93

*Not stated.

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OAKLAND COUNTY.—Continued.

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested.	Value of Products for the past year.	No. of—	No. of Barrels of Oil made the preceding year.	No. of Barrels of Peppermint Oil manufactured the preceding year.	No. of—	No. of Barrels of Beer made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.
$3,500 00	$2,500 00							
3,000 00	1,200 00							
2,300 00	1,550 00							
4,000 00	3,370 00							
4,400 00	1,770 00							
1,500 00	3,000 00							
1,500 00	900 00							
5,000 00	3,600 00							
2,200 00	2,000 00							
2,500 00								
1,500 00	710 00							
6,000 00	3,800 00							
7,500 00	2,900 00				1	450		
12,000 00	5,000 00							
23,000 00	8,750 00						1	2,000
*	*							
11,000 00	5,000 00							140
5,000 00	3,000 00							
$159,200 00	$49,050 00				1	450	1	2,140

* Not stated.

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OAKLAND COUNTY.—Continued.

TOWNSHIPS.	Distilleries.		Fish.	Aggregate of all kinds of Manufactories.		
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Avon,	------	----	----	----------	----	----------
Addison,	------	----	----	----------	----	----------
Bloomfield,	------	119	----	$25,000 00	14	$93,000 00
Brandon,	------	----	----	----------	----	----------
Commerce,	------	----	----	1,100 00	3	1,200 00
Farmington,	------	----	----	----------	----	----------
Groveland,	------	----	----	----------	----	----------
Highland,	------	----	----	----------	----	----------
Holly,	------	----	----	----------	----	----------
Indep'dence,	------	----	----	----------	----	----------
Lyon,	------	----	----	----------	----	----------
Milford,	------	----	----	15,000 00	20	5,100 00
Novi,	------	----	----	----------	----	----------
Oakland,	------	----	----	----------	----	----------
Oxford,	------	----	----	----------	----	----------
Orion,	------	----	----	----------	----	----------
Pontiac,	88	347	----	34,850 00	95	98,500 00
Rose,	------	----	----	----------	----	----------
Royal Oak,	420	----	----	----------	----	----------
Southfield,	------	3	----	800 00	1	125 00
Springfield,	------	----	----	----------	----	----------
Troy,	------	----	----	----------	----	----------
Waterford,	20	----	----	22,300 00	5	47,200 00
White Lake,	------	----	----	----------	----	----------
W. Bloomfi'd	------	140	----	----------	----	----------
Total,	528	609	----	$99,050 00	138	$245,125 00

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OAKLAND COUNTY.—Continued.

MINES WORKED.						
No. of—	Kind of Mineral	Aggregate quantity of Mineral, in Pounds, produced the past year	Aggregate valuation at place of mining of minerals produced the past year	No. of Persons employed	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale
						$8,875 00
						33,400 00
						20,500 00
						2,000 00
						50,718 00
						1,900 00
						3,780 00
						163 00
						19,000 00
						9,500 00
						$149,836 00

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OTTAWA COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Allendale,	18	13	16	62	6				35	36
Blendon,	5	6	11	19	7				13	13
*Chester,										
Crockery,	36	13	31	63	20				50	33
Georgetown,	44	32	54	131	11				75	67
Holland,	94	32	121	197	80	1			204	324
Jamestown,	23	16	23	37	14	1			38	11
Muskegon,	26	11	32	116	3				67	56
Ottawa,	48	26	100	171	38				120	263
Polkton,	55	35	59	138	22				113	196
Ravenna,	22	27	19	45	8	1			34	16
*Spr'g Lake										
Tallmadge,	59	45	146	139	45	1			114	65
White River,	74	66	27	309	16				114	389
Wright,	109	81	92	146	67	1			158	39
Zeeland,	103	45	94	163	85				135	61
Total,	716	448	825	1,736	422	5			1,320	1,569

ONTONAGON COUNTY.

Ontonagon,	104	66	130	965	30				326	759
Pewabic,	18	13	26	306	4				66	244
Rockland,	69	35	44	949	10				203	791
Total,	191	114	200	2,220	44				595	1,794

*Not reported.

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OTTAWA COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy five and over.	Married.	Unmarried.
Allendale,	18	12	19	26	6	....	30	6
Blendon,	5	3	10	10	8	....	14	5
Chester,	-----	-----	-----	-----	-----	----	------	------
Crockery,	17	13	27	41	12	1	51	6
Georgetown,	32	24	32	78	18	....	76	15
Holland,	100	35	81	154	87	2	204	247
Jamestown,	21	13	16	28	12	....	33	2
Muskegon,	18	30	22	70	7	2	56	12
Ottawa,	34	39	55	123	37	....	118	170
Polkton,	57	37	42	96	28	....	111	150
Ravenna,	18	28	19	40	-----	....	33	7
Spring Lake,	-----	-----	-----	-----	-----	----	------	------
Tallmadge,	59	42	70	103	36	1	114	31
White River,	47	68	36	110	13	....	115	161
Wright,	70	66	56	130	49	....	162	11
Zeeland,	90	30	76	136	89	1	185	61
Total,	586	440	561	1,145	402	7	1,302	884

ONTONAGON COUNTY.—Continued.

Ontonagon,	98	57	63	271	21	....	199	*
Pewabic,	33	8	5	65	3	....	57	10
Rockland,	54	19	13	141	4	....	123	*
Total,	185	84	81	477	28	....	379	10

*Not stated.

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OTTAWA COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
--	--	--	---	1	3	115	81	--	--	--	---	196
--	--	1	---	12	7	48	36	--	--	1	---	85
--	--	--	---	---	---	---	---	--	--	--	---	---
--	--	1	---	---	---	163	111	--	--	1	---	275
--	--	--	1	1	---	272	184	--	--	--	1	457
--	--	1	---	3	14	525	459	--	--	1	---	985
--	--	--	---	---	4	114	90	--	--	--	---	204
--	--	2	---	---	7	188	149	--	--	2	---	339
--	--	1	12	6	6	383	288	--	--	1	12	684
1	--	--	---	4	12	309	260	1	--	--	---	570
--	--	--	---	6	3	122	105	--	--	--	---	227
--	--	--	---	---	---	---	---	--	--	--	---	---
--	--	--	---	4	9	435	311	--	--	--	---	746
1	--	--	22	2	3	492	274	1	--	--	22	789
--	--	1	---	---	5	496	371	--	--	1	---	868
--	--	--	---	4	12	490	422	--	--	--	---	912
2	--	7	35	43	85	4,152	3,141	2	--	7	35	7,337

ONTONAGON COUNTY.—Continued.

--	--	--	34	---	---	1,295	510	--	--	--	34	1,839
--	--	--	4	---	---	367	114	--	--	--	4	485
--	--	--	---	---	---	1,107	231	--	--	--	---	1,338
--	--	--	38	---	---	2,769	855	--	--	--	38	3,662

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OTTAWA COUNTY.—Continued.

TOWNSHIPS.	LAND. Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year
Allendale,	15,162	------	357	19	82	1,600
Blendon,	1,820	------	82	3	49	867
Chester,	-------	------	-------	------	------	----------
Crockery,	4,287	------	466	25	64	1,270
Georgetown,	5,823	------	671	69	108	3,265
Holland,	21,280	------	1,880	100	560	11,154
Jamestown,	3,007	------	182	45	76	1,831
Muskegon,	3,660	------	30	------	------	---- -----
Ottawa,	30,384	------	57	12	87	1,475
Polkton,	10,964	------	979	116	197	2,941
Ravenna,	20,978	160	323	84	51	1,340
Spring Lake,	-------	------	-------	------	------	---- -----
Tallmadge,	12,011	------	2,265	340	351	8,120
White River,	39,600	------	72	------	32	960
Wright,	36	------	2,513	506	421	8,508
Zeeland,	18,626	------	3,501	608	760	19,167
Total,	190,838	160	13,378	1,927	2,838	62,498

ONTONAGON COUNTY.—Continued.

Ontonagon,	1,070	10,970	712	------	1	100
Pewabic,	45,483	2,014	-------	------	------	---- ----
Rockland,	-------	9,131	472	------	------	---- ----
Total,	46,553	22,115	1,184	------	1	100

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OTTAWA COUNTY.—CONTINUED.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
5	30	460	1,020	124	40	2,900
1	26	149	825	12	.....	3,356
.....	.....	.....	.....	.....	.....	.....
5	135	1,062	2,659	219	16	350
56	826	1,060	1,721	223	61	2,592
82	1,017	3,360	5,835	66	.....	56,734
31	408	260	1,430	76	18	500
.....	.....	.....	.....	.....	.....	.....
8	155	74	1,773	203	.....	.....
120	1,497	504	2,785	4,010	151	1,500
14	335	1,505	2,215	67	.....	8,330
.....	.....	.....	.....	.....	.....	.....
276	5,269	3,269	4,803	844	954	7,341
.....	.....	750	1,700	250	105	.....
349	3,776	2,720	4,104	670	677	1,407
280	6,097	6,369	11,641	199	.....	21,065
1,227	19,571	21,542	42,511	6,863	2,022	106,075

ONTONAGON COUNTY.—CONTINUED.

.....	2,540	3,100	15,150	109	.....	600
.....	.....	375	4,200	33	.....	.....
850	.....	527	9,770	65	.....	.....
850	2,540	4,002	29,120	207	.....	600

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OTTAWA COUNTY.—Continued.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, 1 year old and over.	No. of Work Oxen.
Allendale,	243	------	450	------	49	33
Blendon,	1,075	------	315	2	22	20
Chester,	------	------	------	------	------	------
Crockery,	2,555	100	200	21	128	62
Georgetown,	812	------	4,001	30	52	77
Holland,	8,060	------	950	18	120	118
Jamestown,	4,470	675	5,900	6	50	40
Muskegon,	------	------	------	32	12	40
Ottawa,	325	------	------	59	32	71
Polkton,	7,082	------	5,802	36	104	134
Ravenna,	1,675	------	5,300	8	73	32
Spring Lake,	------	------	------	------	------	------
Tallmadge,	13,677	650	9,055	78	193	116
White River,	------	------	------	32	37	208
Wright,	10,165	------	9,045	41	279	146
Zeeland,	22,731	91	3,306	18	199	186
Total,	72,870	1,516	44,324	381	1,350	1,278

ONTONAGON COUNTY.—Continued.

Ontonagon,	500	------	------	75	12	82
Pewabic,	------	------	------	35	------	32
Rockland,	------	------	------	51	12	58
Total,	500	------	------	161	24	172

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OTTAWA COUNTY.—Continued.

STOCK.				FLOURING MILLS.							
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested
38	23	32	--	--	--	-------	----	---	--	----------
21	------	27	--	--	--	-------	----	---	--	----------
-----	------	------	--	--	--	-------	----	---	--	----------
61	------	124	--	--	--	-------	----	---	--	----------
67	35	125	--	--	--	-------	----	---	--	----------
187	------	406	--	1	1	*	----	1	2	$1,000 00
45	9	78	--	--	--	-------	----	---	--	----------
17	------	17	--	--	--	-------	----	---	--	----------
75	------	112	2	--	--	-------	----	---	--	----------
162	98	193	--	--	--	-------	----	---	--	----------
53	------	134	--	--	--	-------	----	---	--	----------
-----	------	------	--	--	--	-------	----	---	--	----------
236	402	314	--	--	--	-------	----	---	--	----------
144	30	440	--	--	--	-------	----	---	--	----------
224	291	295	--	1	2	1,500	----	1	1	2,000 00
316	------	677	--	--	--	-------	----	---	--	----------
1,646	888	2,974	2	2	3	1,500	----	2	3	3,000 00

ONTONAGON COUNTY.—Continued.

32	6	146	4	--	--	-------	----	---	--	----------
7	------	------	--	--	--	-------	----	---	--	----------
7	------	58	1	--	--	-------	----	---	--	----------
46	6	204	5	--	--	-------	----	---	--	----------

*Not stated

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OTTAWA COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Allendale,	----------	1	100,000	----	1	1
Blendon,	----------	--	----------	----	---	-------
Chester,	----------	--	----------	----	---	-------
Crockery,	----------	--	----------	----	---	-------
Georgetown,	----------	2	1,550,000	----	2	6
Holland,	*	3	1,900,000	2	1	31
Jamestown,	----------	--	----------	----	---	-------
Muskegon,	----------	11	28,100,000	8	3	252
Ottawa,	----------	3	9,800,000	2	1	56
Polkton,	----------	1	100,000	----	1	1
Ravenna,	----------	2	300,000	----	2	6
Spring Lake,	----------	--	----------	----	---	-------
Tallmadge,	----------	5	2,300,000	----	5	38
White River,	----------	11	15,100,000	3	8	232
Wright,	$815 00	1	400,000	----	1	3
Zeeland,	----------	--	----------	----	---	-------
Total,	$815 00	40	59,650,000	15	25	626

ONTONAGON COUNTY.—Continued.

Ontonagon,	----------	3	3,020,000	*	*	44
Pewabic,	----------	--	----------	----	---	-------
Rockland,	----------	1	250,000	*	*	12
Total,	----------	4	3,270,000	----	---	56

*Not stated.

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OTTAWA COUNTY.—Continued.

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of Barrels of Oil made the preceding year.	No. of Barrels of Peppermint Oil manufactured the preceding year.	No. of—	No. of Barrels of Beer Made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.
$300 00	$300 00	--	----	----	--	------	--	-------
----------	----------	--	----	----	--	------	--	-------
----------	----------	--	----	----	--	------	--	-------
----------	----------	--	----	----	--	------	--	-------
3,600 00	8,350 00	--	----	----	--	------	--	-------
11,000 00	16,700 00	1	3	----	--	------	--	-------
----------	----------	--	----	----	--	------	--	-------
*	*	--	----	----	--	------	--	-------
27,000 00	88,200 00	--	----	----	--	------	--	-------
1,000 00	700 00	--	----	----	--	------	--	-------
5,000 00	2,000 00	--	----	----	--	------	--	-------
----------	----------	--	----	----	--	------	--	-------
20,000 00	12,000 00	--	----	----	--	------	--	-------
74,000 00	89,500 00	--	----	----	--	------	--	-------
1,200 00	800 00	--	----	----	--	------	--	-------
----------	----------	--	----	----	--	------	--	-------
$14,310 00	$218,550 00	1	3	----	--	------	--	-------

ONTONAGON COUNTY.—Continued.

$23,000 00	$32,000 00	--	----	----	--	------	--	-------
----------	----------	--	----	----	--	------	--	-------
6,000 00	4,500 00	--	----	----	--	------	--	-------
$29,000 00	$36,500 00	--	----	----	--	------	--	-------

*Not stated.

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OTTAWA COUNTY.—Continued.

TOWNSHIPS.	Distilleries. No. of Gallons of Wine made the preceding year.	Distilleries. No. of Barrels of Cider made the preceding year.	Fish. No. of Barrels caught the preceding year.	Aggregate of all kinds of Manufactories. Amount of Capital invested	Aggregate of all kinds of Manufactories. No. of Persons employed.	Aggregate of all kinds of Manufactories. Value of Products for the past year.
Allendale,	------	----	----	----------	----	----------
Blendon,	------	----	----	----------	----	----------
Chester,	------	----	----	----------	----	----------
Crockery,	------	----	----	----------	----	----------
Georgetown,	------	----	----	$500 00	2	$1,050 00
Holland,	------	----	----	5,400 00	12	3,480 00
Jamestown,	------	----	----	----------	----	----------
Muskegon,	------	----	----	----------	----	----------
Ottawa,	------	----	288	10,000 00	8	12,000 00
Polkton,	------	----	----	1,000 00	1	1,460 0
Ravenna,	------	----	----	----------	----	----------
Spring Lake,	------	----	----	----------	----	----------
Tallmadge,	------	----	----	----------	----	----------
White River,	------	----	378	----------	----	----------
Wright,	------	----	----	----------	----	----------
Zeeland,	------	----	----	----------	----	----------
Total,	------	----	666	$16,900 00	23	$17,990 00

ONTONAGON COUNTY.—Continued.

Ontonagon,	------	----	170	----------	----	----------
Pewabic,	------	----	----	----------	----	----------
Rockland,	------	----	----	----------	----	----------
Total,	------	----	170	----------	----	----------

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OTTAWA COUNTY.—Continued.

MINES WORKED.						
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in pounds, produced the past year.	Aggregate valuation at place of mining of minerals produced the past year.	No of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
..	.....	.....	.....	....	.....	.....
..	.....	.....	.....	....	.....	.....
..	.....	.....	.....	....	.....	.....
..	.....	.....	.....	....	.....	.....
..	.....	.....	.....	....	.....	.....
..	.....	.....	.....	....	.....	$18,550 00
..	.....	.....	.....	....	.....	.....
..	.....	.....	.....	....	.....	.....
1	*	*	*	*	*	.....
..	.....	.....	.....	....	.....	.....
..	.....	.....	.....	....	.....	.....
..	.....	.....	.....	....	.....	.....
..	.....	.....	.....	....	.....	20,000 00
..	.....	.....	.....	....	.....	32,000 00
..	.....	.....	.....	....	.....	1,700 00
..	.....	.....	.....	....	.....	.....
1	.....	.....	.....	....	.....	$72,250 00

ONTONAGON COUNTY.—Continued.

..	Native	88½ tons.	$350, per ton.	472	$1,096,900	.....
..	Cop-	*	*	251	2,225,000	.....
..	per.	681½ tons.	*	446	578,000	.....
..	.....	770 tons.	$350, per ton.	1,169	$3,899,900	.....

* Not stated.

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SAGINAW COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Bridgeport,	29	23	28	52	15	1	--	-	51	22
*Buena Vista	-----	-----	-----	-----	-----	--	--	-	-----	-----
Frank'nmuth	66	37	48	140	33	--	--	-	106	35
*Hampton,	-----	-----	-----	-----	-----	--	--	-	-----	-----
Midland,	15	14	17	44	6	1	--	-	28	26
*Northamt'n	-----	-----	-----	-----	-----	--	--	-	-----	-----
*Saginaw,	-----	-----	-----	-----	-----	--	--	-	-----	-----
*Taymouth,	-----	-----	-----	-----	-----	--	--	-	-----	-----
*Titabawa'se	-----	-----	-----	-----	-----	--	--	-	-----	-----
Total,	110	74	93	236	54	2	--	-	185	83

SANILAC COUNTY.

Austin,	32	33	34	160	21	1	--	-	11	9
Lexinxgton,	166	120	128	335	46	--	--	-	257	537
Sanilac,	56	35	76	141	29	1	--	-	113	227
Worth,	15	108	129	186	61	1	--	-	200	52
Total,	269	296	367	822	157	3	--	-	581	825

*Not reported.

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SAGINAW COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Bridgeport,	28	11	19	42	16	----	50	16
Buena Vista,	-----	-----	-----	-----	-----	----	------	------
Frank'nmuth	71	38	29	119	41	----	101	18
Hampton,	-----	-----	-----	-----	-----	----	------	------
Midland,	14	15	10	22	7	----	24	2
Northampt'n	-----	-----	-----	-----	-----	----	------	------
Saginaw,	-----	-----	-----	-----	-----	----	------	------
Taymouth,	-----	-----	-----	-----	-----	----	------	------
Titabawassee	-----	-----	-----	-----	-----	----	------	------
Total,	113	64	58	183	64	----	175	36

SANILAC COUNTY.—Continued.

Austin,	29	33	30	83	8	----	------	------
Lexington,	142	113	113	275	39	----	261	418
Sanilac,	53	40	41	96	25	----	121	134
Worth,	113	77	92	150	54	1	186	9
Total,	337	263	276	604	126	1	568	561

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SAGINAW COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
--	--	--	--	3	1	148	116	--	--	--	--	264
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	1	--	16	20	324	298	--	--	1	--	623
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	1	--	3	1	97	68	--	--	1	--	166
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	2	--	22	22	569	482	--	--	2	--	1,053

SANILAC COUNTY.—Continued.

--	--	--	--	--	--	281	183	--	--	--	--	464
1	--	--	6	15	7	795	682	1	--	--	6	1,484
--	--	--	--	1	4	338	255	--	--	--	--	593
--	--	1	--	--	1	500	487	--	--	1	--	988
1	--	1	6	16	12	1,914	1,607	1	--	1	6	3,529

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SAGINAW COUNTY.—Continued.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised preceding year
Bridgeport,	19,507	------	621	112	76	1,295
Buena Vista,	------	------	------	------	------	------
Frank'nmuth	15,248	6,792	1,673	357	72	1,443
Hampton,	------	------	------	------	------	------
Midland,	27,173	------	378	105	105	4,165
Northampt'n	------	------	------	------	------	------
Saginaw,	------	------	------	------	------	------
Taymouth,	------	------	------	------	------	------
Titabawas'ee,	------	------	------	------	------	------
Total,	61,928	6,792	2,672	574	253	6,903

SANILAC COUNTY.—Continued.

Austin,	34,185	340	362	------	------	------
Lexington,	12,599	------	2,503	212	54	1,038
Sanilac,	8,351	------	537	18	31	634
Worth,	11,505	------	3,386	409	90	1,944
Total,	66,640	340	6,788	639	175	3,616

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SAGINAW COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
49	716	1,404	1,717	361	131	1,600
245	4,070	6,952	2,135	177	-------	-------
43	2,430	1,000	1,170	72	150	-------
-------	-------	-------	-------	-------	-------	-------
-------	-------	-------	-------	-------	-------	-------
-------	-------	-------	-------	-------	-------	-------
-------	-------	-------	-------	-------	-------	-------
337	7,216	9,356	5,022	610	281	1,600

SANILAC COUNTY.—Continued.

-------	-------	600	2,200	-------	-------	1,000
182	3,859	8,705	3,789	1,089	404	5,000
11	200	1,755	3,677	95	20	-------
348	6,871	11,867	3,983	1,032	1,128	3,975
541	10,930	22,927	13,649	2,216	1,552	9,975

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SAGINAW COUNTY.—Continued.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Bridgeport,	3,987	------	1,450	36	51	44
Buena Vista,	------	------	------	------	------	------
Frank'nmuth	1,200	------	210	8	65	52
Hampton,	------	------	------	------	------	------
Midland,	1,100	------	500	25	21	29
Northampt'n	------	------	------	------	------	------
Saginaw,	------	------	------	------	------	------
Taymouth,	------	------	------	------	------	------
Titabawassee	------	------	------	------	------	------
Total,	6,287	------	2,160	69	137	125

SANILAC COUNTY.—Continued.

Austin,	------	------	300	28	------	58
Lexington,	------	------	1,090	140	51	218
Sanilac,	2,260	------	700	18	12	67
Worth,	11,479	180	3,407	125	171	123
Total,	13,739	180	5,497	311	234	466

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SAGINAW COUNTY.—Continued.

STOCK.				FLOURING MILLS.						
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested.
85	26	90	--	--	--	--------	----	---	--	----------
-----	------	------	--	--	--	--------	----	---	--	----------
134	------	210	--	1	1	600	----	1	2	$3,000 00
-----	------	------	--	--	--	--------	----	---	--	----------
29	30	89	--	--	--	--------	----	---	--	----------
-----	------	------	--	--	--	--------	----	---	--	----------
-----	------	------	--	--	--	--------	----	---	--	----------
-----	------	------	--	--	--	--------	----	---	--	----------
-----	------	------	--	--	--	--------	----	---	--	----------
248	56	389	--	1	1	600	----	1	2	$3,000 00

SANILAC COUNTY.—Continued.

12	------	8	--	--	--	--------	----	---	--	----------
223	270	204	6		4	*	----	1	2	$2,000 00
52	------	33	--	--	--	--------	----	---	--	----------
206	376	273	--	--	--	--------	----	---	--	----------
493	646	518	6	1	4	--------	----	1	2	$2,000 00

*Not stated.

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SAGINAW COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Bridgeport,	----------	1	1,000,000	1	---	4
Buena Vista,	----------	--	----------	----	---	------
Frank'nmuth	$1,500 00	1	500,000	----	1	4
Hampton,	----------	--	----------	----	---	------
Midland,	----------	--	----------	----	---	------
Northampt'n	----------	--	----------	----	---	------
Saginaw,	----------	--	----------	----	---	------
Taymouth,	----------	--	----------	----	---	------
Titabawassee	----------	--	----------	----	---	------
Total,	$1,500 00	2	1,500 00	1	1	8

SANILAC COUNTY.—Continued.

Austin,	----------	4	3,700,000	3	*	161
Lexington,	$1,000 00	5	4,900,000	2	3	55
Sanilac,	----------	3	600,000	1	2	18
Worth,	----------	4	4,130,000	2	2	56
Total,	$1,000 00	16	13,330,000	8	7	290

* Not stated.

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SAGINAW COUNTY.—CONTINUED.

MILLS.		OIL MILLS			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of barrels of Oil made the preceding year	No. of Barrels of Peppermint Oil manufactured the preceding year	No. of—	No. of Barrels of Beer made the preceding year	No. of—	No. of Gallons of Liquor made the preceding year.
$2,000 00	$10,000 00	--	----	----	--	------	--	---- ----
----------	----------	--	----	----	--	------	--	---- ----
6,000 00	4,000 00	--	----	----	--	------	--	---- ----
----------	----------	--	----	----	--	------	--	---- ----
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----------	----------	--	----	----	--	------	--	---- ----
----------	----------	--	----	----	--	------	--	---- ----
$8,000 00	$14,000 00	--	----	----	--	------	--	---- ----

SANILAC COUNTY.—CONTINUED.

$78,000 00	$38,000 00	--	----	----	--	------	--	---- ----
19,500 00	39,000 00	--	----	---	--	------	--	---- ----
6,000 00	5,000 00	--	----	----	--	------	--	---- ----
31,500 00	22,700 00	--	----	----	--	------	--	---- ----
$135 000 00	$104,700 00	--	----	----	--	------	--	---- ----

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SAGINAW COUNTY.—Continued.

TOWNSHIPS.	Distilleries.		Fish.	Aggregate of all kinds of Manufactories.		
	No. Gallons of Wine made the preceding year	No. of Barrels of Cider made the preceding year	No. of Barrels caught the preceding year	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year
Bridgeport,	------	----	----	$500 00	6	$1,500 00
Buena Vista,	------	----	----	----------	----	----------
Frank'nmuth	------	----	20	*	4	400 00
Hampton,	------	----	----	----------	----	----------
Midland,	------	----	----	----------	----	----------
Northampt'n	------	----	----	----------	----	----------
Saginaw,	------	----	----	----------	----	----------
Taymouth,	------	----	----	----------	----	----------
Titabawassee	------	----	----	----------	----	----------
Total,	------	----	20	$500 00	10	$1,900 00

SANILAC COUNTY.—Continued.

Austin,	------	----	----	----------	----	----------
Lexington,	------	----	----	----------	----	----------
Sanilac,	------	----	2340	----------	----	----------
Worth,	------	----	60	----------	----	----------
Total,	------	----	2400	----------	----	----------

*Not stated.

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SAGINAW COUNTY.—Continued.

MINES WORKED.						
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in pounds, produced the past year.	Aggregate valuation at place of Mining of Minerals produced the past year	No. of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
						$1,200 00
						6,000 00
						$7,200 00

SANILAC COUNTY.—Continued.

						$12,000 00
						$12,000 00

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SHIAWASSEE COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Antrim,	31	37	78	47	29				65	4
Burns,	86	74	131	153	69	1			175	331
Bennington,	50	55	90	116	35	2			117	34
Caledonia,	86	71	120	153	46	2			151	315
Fairfield,	5	4	13	14	3				15	2
Hazleton,	8	4	5	14	4				15	4
Middlebury,	43	37	42	44	11	1			3	1
New Haven,	13	15	24	31	10				36	5
Owosso,	60	41	78	113	36	1			113	215
Perry,	49	31	62	81	32	1			85	25
Rush,	15	12	20	16	5				20	48
Shiawassee,	85	77	105	131	57	5			161	37
Sciota,	23	21	30	57	24				57	11
Vernon	69	69	118	106	53	6			148	
Venice,	34	39	48	66	20				73	
Woodhull,	22	24	47	47	27	2			34	12
Total,	679	611	1,011	1,189	461	21			1,268	1,044

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SHIAWASSEE COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Antrim,	32	42	34	57	26	....	68	.....
Burns,	64	61	84	153	70	1	184	249
Bennington,	49	49	59	110	45	....	121	30
Caledonia,	73	73	99	130	47	2	151	271
Fairfield,	10	6	1	14	4	....	17	1
Hazleton,	11	3	7	12	4	....	15	1
Middlebury,	2	1	...	32	16	....	31	5
New Haven,	13	15	16	27	10	....	38	5
Owosso,	37	42	61	107	44	1	....	....
Perry,	32	28	37	60	31	1	84	10
Rush,	8	8	15	17	10	....	20	38
Shiawassee,	81	65	86	151	70	4	165	29
Sciota,	24	11	34	48	23	1	59	13
Vernon,	62	55	86	109	55	2	150	....
Venice,	34	30	55	55	26	....	72	....
Woodhull,	22	24	42	51	28	2	37	14
Total,	554	513	716	1,133	509	14	1,222	666

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SHIAWASSEE COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year	Number of Deaths preceding year	No of Males	No. of Females	No. of Blind	No. of Deaf and Dumb	No. of Insane or Idiotic	No. of Colored Persons.	TOTAL.
--	--	--	--	---	2	222	191	--	--	--	---	413
1	--	1	---	3	8	514	433	1	--	1	---	949
--	--	--	---	1	1	348	312	--	--	--	---	660
--	--	3	---	4	2	478	424	--	--	3	---	905
--	--	--	---	---	---	39	35	--	--	--	---	74
--	--	--	---	---	1	35	37	--	--	--	---	72
--	--	--	---	---	---	178	51	--	--	--	---	229
--	--	--	---	5	4	93	81	--	--	--	---	174
--	--	--	---	4	1	329	292	--	--	--	---	621
--	--	--	---	5	5	256	189	--	--	--	---	445
--	--	--	---	---	---	68	58	--	--	--	---	126
--	--	--	---	---	---	460	457	--	--	--	---	917
--	1	--	---	---	1	155	141	--	1	--	---	297
--	--	--	---	7	4	421	369	--	--	--	---	790
1	--	1	---	1	6	207	200	1	--	1	---	409
--	--	--	---	---	2	169	169	--	--	--	---	338
2	1	5	---	30	33	3,972	3,439	2	1	5	---	7,419

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SHIAWASSEE COUNTY.—CONTINUED.

TOWNSHIPS.	LAND. Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year
Antrim,	7,078	.....	1,171	480	301	6,079
Burns,	22,295	.....	4,001	1,109	504	9,163
Bennington,	11,381	.....	4,693	1,184	464	7,605
Caledonia,	7,246	.....	2,029	380	245	4,530
Fairfield,	1,232	.....	85	24	13	40
Hazleton,	20,969	.....	84	22	19	133
Middlebury,	4,762	.....	823	238	172	4,372
New Haven,	3,487	.....	490	40	63	517
Owosso,	7,074	.....	1,192	324	210	2,975
Perry,	9,606	.....	2,731	722	355	4,933
Rush,	1,605	.....	185	56	40	1,010
Shiawassee,	15,995	.....	4,653	873	661	7,901
Sciota,	8,438	.....	1,899	623	251	3,897
Vernon,	10,118	.....	2,902	671	338	4,450
Venice,	5,752	.....	1,152	356	149	1,737
Woodhull,	8,147	.....	1,953	857	326	5,605
Total,	145,185	.....	30,043	7,960	4,111	64,947

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SHIAWASSEE COUNTY.—CONTINUED.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year	No. of Bushels of all other kinds of Grain raised the preceding year	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork manufactured the preceding year
337	4,341	930	2,083	763	892	1,865
803	9,358	4,257	5,487	1,490	3,367	8,965
804	10,201	4,314	4,295	1,027	3,999	13,026
303	3,631	2,052	1,701	664	1,042	5,675
14	167	------	126	------	-----	-----
9	90	20	148	29	-----	-----
196	3,135	733	1,507	261	264	9,745
19	346	183	258	289	186	-----
167	2,122	1,462	1,771	573	392	5,250
685	8,665	1,958	3,308	800	1,725	10,720
21	330	340	360	19	140	1,400
1,057	12,066	5,601	3,669	2,075	3,103	9,658
383	4,175	2,332	2,256	770	800	4,675
527	6,060	1,980	2,080	790	2,981	2,715
255	3,097	1,005	1,011	351	1,019	4,874
531	6,387	1,214	3,569	838	1,454	3,017
6,111	74,171	26,381	33,629	10,655	21,364	81,495

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SHIAWASSEE COUNTY.—Continued.

TOWNSHIPS	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year	No. of Pounds of Sugar manufactured the present year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Antrim,	9,885	120	735	47	108	104
Burns,	14,670	2,250	320	150	351	169
Bennington,	13,885	1,110	5,716	164	277	161
Caledonia,	2,760	920	4,778	104	161	126
Fairfield,						
Hazleton,	113		854		24	14
Middlebury,	3,905	90	3,110	31	107	63
New Haven,	2,920	470	3,798	16	61	39
Owosso,	9,620	680	4,925	86	148	62
Perry,	9,782	485	3,319	74	269	134
Rush,	1,190		315	9	26	26
Shiawassee,	29,090	5,853	3,892	752	296	202
Sciota,	7,065	945	905	55	132	101
Vernon,	12,480	2,820	7,410	130	349	138
Venice,	6,402		2,620	42	136	88
Woodhull,	7,845	300	200	64	130	117
Total,	132,612	16,062	43,787	1,724	2,489	1,560

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SHIAWASSEE COUNTY.—CONTINUED.

STOCK.				FLOURING MILLS.					
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested
148	362	229	-	--	--	------	----	---	--	----------
297	1,552	553	-	1	2	4,000	----	1	3	$8,000 00
265	1,617	426	-	--	--	------	----	---	--	----------
236	438	352	-	1	2	*	----	1	2	6,000 00
------	-------	------	-	--	--	------	----	---	--	----------
20	-------	30	-	--	--	------	----	---	--	----------
79	87	130	-	--	--	------	----	---	--	----------
74	63	44	-	--	--	------	----	---	--	----------
184	216	282	-	1	2	1,884	----	1	3	9,000 00
175	629	392	-	--	--	------	----	---	--	----------
33	38	53	-	--	--	------	----	---	--	----------
466	1,065	473	-	--	--	------	----	---	--	----------
134	266	191	-	--	--	------	----	---	--	----------
275	1,141	404	-	--	--	------	----	---	--	----------
137	371	207	-	--	--	------	----	---	--	----------
145	647	279	-	--	--	------	----	---	--	----------
2,686	8,472	4,750	-	3	6	5,884	----	3	8	$23,000 00

*Not stated.

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SHIAWASSEE COUNTY.—CONTINUED.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Antrim,						
Burns,	$20,000 00	1	500,000		1	3
Bennington,		1	300,000	1		2
Caledonia,	*	2	300,000		2	4
Fairfield,						
Hazleton,						
Middlebury,						
New Haven,						
Owosso,	9,681 75	1	200,000		1	2
Perry,						
Rush,						
Shiawassee,						
Sciota,						
Vernon,						
Venice,						
Woodhull,						
Total,	$29,681 75	5	1,300,000	1	4	11

*Not stated.

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SHIAWASSEE COUNTY.—CONTINUED.

MILLS		OIL MILLS.			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of Barrels of Oil made the preceding year	No. of Barrels of Peppermint Oil manufactured the preceding year	No. of—	No. of Barrels of Beer made the preceding year	No. of—	No. of Gallons of Liquor made the preceding year.
$1,000 00	$3,000 00							
1,200 00	750 00							
3,000 00	2,000 00							
3,000 00	1,200 00							
$9,200 00	$6,950 00							

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SHIAWASSEE COUNTY.—CONTINUED.

TOWNSHIPS.	DISTILLERIES.		FISH.	AGGREGATE OF ALL KINDS OF MANUFACTORIES.		
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Antrim,						
Burns,				$2,000 00	4	$2,500 00
Bennington,						
Caledonia,				2,000 00	3	2,000 00
Fairfield,						
Hazleton,						
Middlebury,						
New Haven,						
Owosso,				5,850 00	8	*
Perry,						
Rush,						
Shiawassee,						
Sciota,						
Vernon,						
Venice,						
Woodhull,						
Total,				$9,850 00	15	$4,500 00

* Not stated.

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SHIAWASSEE COUNTY.—CONTINUED.

MINES WORKED.						
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in Pounds, produced the past year.	Aggregate valuation at place of mining of minerals produced the past year	No. of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
						$37,310 00
						30,500 00
						$67,810 00

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ST. CLAIR COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Berlin,	72	72	98	121	49	2	--	-	144	268
Brockway,	52	30	44	85	19	--	--	-	67	23
Burchville,	91	71	115	205	55	4	1	-	171	376
Casco,	42	40	55	115	34	--	--	-	111	*33
China,	126	100	136	161	91	8	--	-	208	52
Clay,	90	89	98	164	42	4	--	-	174	37
Columbus,	74	59	91	112	23	2	--	-	113	24
Cottrellville,	140	94	150	320	61	3	--	-	257	126
Clyde,	100	93	146	214	53	4	--	-	195	94
Emmet,	30	65	59	97	25	1	--	-	91	184
Ira,	106	100	125	147	49	1	--	-	149	35
Lynn,	11	18	14	41	12	--	--	-	35	17
Port Huron,	231	208	338	684	152	7	--	-	567	1,053
Riley,	56	39	75	103	27	4	--	-	104	31
St. Clair,	304	229	295	664	169	5	--	-	534	1,132
Wales,	45	41	58	74	26	2	--	-	75	171
Total,	1,570	1,348	1,897	3,307	887	47	1	-	2,995	3,656

*EMMET COUNTY.

Peaine,	190	201	278	235	73	14	2	-	166	69
†	59	58	99	73	31	9	2	1	61	12
Total,	249	259	377	308	104	23	4	1	227	81

* Received too late to be placed in its order, alphabetically.

† Unorganized Territory—consisting of some small islands, and about five townships on the main land, east of Peaine; a few islands at the entrance of Green Bay, and a few very small islands south of Charlevoix.

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ST. CLAIR COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Berlin,	68	58	82	101	52	1	137	223
Brockway,	23	21	25	60	22	2	67	7
Burchville,	104	81	94	136	45	2	169	293
Casco,	42	38	41	90	29	----	113	7
China,	96	108	114	176	89	5	205	49
Clay,	76	63	83	175	44	4	173	50
Columbus,	58	48	56	87	44	5	113	22
Cottrellville,	140	96	119	240	76	3	201	76
Clyde,	104	82	101	177	56	3	197	46
Emmet,	18	32	44	85	17	----	93	104
Ira,	62	74	61	129	55	1	149	36
Lynn,	12	7	14	30	8	----	33	2
Port Huron,	285	197	284	538	160	4	537	931
Riley,	64	38	48	91	37	1	104	10
St. Clair,	248	217	267	538	154	8	534	899
Wales,	41	35	29	64	26	----	76	119
Total,	1,441	1,195	1,462	2,717	914	39	2,901	2,874

EMMET COUNTY.—Continued.

Pearne,	157	214	279	246	94	37	183	63
	61	55	92	74	29	14	62	12
Total,	218	269	371	320	123	51	245	75

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ST. CLAIR COUNTY.—Continued

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
..	..	2	...	8	10	414	362	..	..	2	...	778
..	..	..	...	...	...	230	153	..	..	..	...	383
..	4	..	4	4	1	542	462	..	1	..	4	1,009
..	..	..	...	20	2	286	240	..	..	..	...	526
..	..	1	...	5	9	622	588	..	..	1	...	1,211
..	..	1	...	4	10	487	445	..	..	1	...	933
..	..	1	...	2	4	361	298	..	..	1	...	660
..	1	2	2	3	4	768	674	..	1	2	2	1,447
..	2	..	...	6	10	610	523	..	2	..	...	1,135
..	..	..	...	...	...	277	196	..	..	..	...	473
..	..	1	...	6	21	528	382	..	..	1	...	911
..	..	1	...	...	...	96	71	..	..	1	...	168
..	2	5	18	65	51	1,620	1,468	..	2	5	18	3,113
..	..	..	...	3	4	304	279	..	..	..	...	583
3	..	1	23	19	48	1,666	1,432	3	..	1	23	3,125
..	1	..	...	2	6	246	195	..	1	..	...	442
3	7	15	47	147	180	9,057	7,768	3	7	15	47	16,897

EMMET COUNTY.—Continued.

..	..	1	...	10	9	993	1,027	..	..	1	...	2,021
..	..	1	...	3	5	332	325	..	..	1	...	658
..	..	2	...	13	14	1,325	1,352	..	..	2	...	2,679

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ST. CLAIR COUNTY.—CONTINUED.

TOWNSHIPS.	LAND. Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year
*Berlin,						
Brockway,	7,955		1,238	10	10	527
Burchville,	15,989		2,191	331	113	2,281
Casco,	5,099		747	140	19	2,013
China,	13,822		3,481	403	411	10,593
Clay,	8,236		1,354	813	166	3,947
Columbus,	9,154	240	2,069	189	266	5,828
Cottrellville,	6,243		1,247	125	137	3,334
Clyde,	21,980		2,667	100	121	2,758
Emmet,	7,295		940	29	48	588
Ira,	7,258	99	945	74	61	1,101
*Lynn,						
*Port Huron						
Riley,	8,313		1,716	293	224	6,125
St. Clair,	18,790	48	2,918	176	259	5,671
Wales,	6,309	240	745	120	158	2,512
Total,	36,423	627	22,258	2,803	1,993	47,278

*Not reported.

EMMET COUNTY.—CONTINUED.

Peaine,	1,046	14	656	26	71	1,210
	2,687	2	215	2	36	876
Total,	3,733	16	871	28	107	2,086

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ST. CLAIR COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
1	623	3,562	4,478	401	.....	.....
150	2,691	6,898	4,906	869	442	2,050
71	578	3,336	3,027	249	626	3,686
303	5,488	10,595	11,919	1,607	4,970	78,468
142	2,764	3,558	6,583	590	2,125	8,301
195	2,328	7,949	7,007	735	1,344	8,715
90	1,930	4,118	3,670	885	2,288	3,580
44	662	5,510	8,310	1,219	1,128	1,380
27	650	2,151	2,378	327	25	6,795
82	1,026	3,507	4,043	638	843	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
198	2,681	7,256	2,810	463	787	10,805
158	1,288	7,776	13,580	1,741	1,106	11,000
31	365	3,712	44	344	151	1,497
1,482	23,074	69,928	77,142	10,068	15,835	136,277

EMMET COUNTY.—Continued.

111	.....	5,987	28,563	117	28	25,371
.....	.....	587	9,611	47	.....	7,200
111	.....	6,574	38,174	164	28	32,571

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ST. CLAIR COUNTY.—Continued.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, 1 year old and over.	No. of Work Oxen.
Berlin,	----	----	----	----	----	----
Brockway,	300	----	125	73	53	127
Burchville	9,010	50	2,500	125	202	136
Casco,	4,124	100	1,144	22	44	56
China,	25,235	2,970	----	281	411	96
Clay,	5,225	----	----	162	218	54
Columbus,	18,993	325	1,760	139	189	78
Cottrellville,	7,179	90	----	152	98	52
Clyde,	12,980	100	1,150	153	138	197
Emmet,	3,020	----	1,300	43	73	76
Ira,	5,579	175	840	177	213	76
Lynn,	----	----	----	----	----	----
Port Huron,	----	----	----	----	----	----
Riley,	13,392	850	2,919	80	89	88
St. Clair,	22,545	100	324	227	333	204
Wales,	6,806	301	916	25	55	96
Total,	134,388	5,061	12,978	1,659	2,116	1,336

EMMET COUNTY.—Continued.

Peaine,	2,865	15	41,318	21	65	28
----	518	----	15,950	36	17	2
Total,	3,383	15	57,268	57	82	30

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ST. CLAIR COUNTY.—Continued.

STOCK.				FLOURING MILLS.						
							Power Used.			
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Steam.	Water.	No. of Persons employed	Amount of Capital invested
-----	------	------	--	--	--	--------	----	---	--	----------
81	------	86	2	--	--	--------	----	---	--	----------
225	241	322	--	--	--	--------	----	---	--	----------
127	159	221	--	--	--	--------	----	---	--	----------
420	1,933	504	--	--	--	--------	----	---	--	----------
237	952	298	--	--	--	--------	----	---	--	----------
249	457	360	--	1	1	3,000	----	1	1	$1,000 00
208	1,062	193	--	--	--	--------	----	---	--	----------
188	467	241	--	1	1	100	----	1	1	3,000 00
115	12	144	--	--	--	--------	----	---	--	----------
194	427	328	--	--	--	--------	----	---	--	----------
-----	------	------	--	--	--	--------	----	---	--	----------
-----	------	------	--	--	--	--------	----	---	--	----------
160	366	253	--	1	2	4,000	----	1	2	5,000 00
424	164	516	--	1	2	*	1	---	4	15,000 00
139	54	167	--	--	--	--------	----	---	--	----------
2,767	6,294	3,633	2	4	6	7,100	1	3	8	24,000 00

* Not stated.

EMMET COUNTY.—Continued.

53	26	42	--	--	--	--------	----	---	--	----------
18	------	12	--	--	--	--------	----	---	--	----------
71	26	54	--	--	--	--------	----	---	--	----------

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ST. CLAIR COUNTY.—CONTINUED.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Berlin,						
Brockway,		1	300,000		1	4
Burchville,		4	3,820,000	2	2	60
Casco,						
China,		1	1,000,000	1		6
Clay,		3	5,800,000	1	2	44
Columbus,	*	1	200,000		1	2
Cottrellville,		4	9,200,000	4		65
Clyde,	*	13	3,550,000		13	62
Emmet,		1	200,000		1	4
Ira,		1	150,000	1		10
Lynn,						
Port Huron,						
Riley,	$23,000 00	2	900,000		2	4
St. Clair,	11,000 00	7	21,000,000	7		182
Wales,		1	200,000		1	2
Total,	$34,000 00	39	46,320,000	16	23	445

EMMET COUNTY.—CONTINUED.

Peaine,		1	56,000	1		5
		1	15,000		1	*
Total,		2	71,000	1	1	5

*Not stated.

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ST. CLAIR COUNTY.—CONTINUED.

MILLS.		OIL MILLS.			BREWERIES.		
Amount of Capital Invested	Value of Products for the past year.	No. of—	No. of Barrels of Oil made the preceding year.	No. of Barrels of Peppermint Oil manufactured the preceding year.	No. of—	No. of Barrels of Beer Made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.
*	*							
$14,500 00	$39,500 00							
8,000 00	10,000 00							
26,000 00	10,000 00							
4,000 00	1,600 00							
37,000 00	74,000 00							
27,000 00	28,200 00							
6,000 00	12,000 00							
500 00	1,400 00							
3,500 00	9,000 00							
205,000 00	205,000 00							
1,400 00	600 00							
$332,900 00	$391,300 00							

* Not stated.

EMMET COUNTY.—CONTINUED.

$2,300 00	$700 00							
150 00	200 00							
$2,450 00	$900 00							

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ST. CLAIR COUNTY.—CONTINUED.

TOWNSHIPS.	DISTILLERIES. No. of Gallons of Wine made the preceding year.	DISTILLERIES. No. of Barrels of Cider made the preceding year.	FISH No. of Barrels caught the preceding year.	AGGREGATE OF ALL KINDS OF MANUFACTORIES. Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Berlin,						
Brockway,						
Burchville,				$5,200 00	11	$8,500 00
Casco,						
China,						
Clay,						
Columbus,						
Cottrellville,			230			
Clyde,						
Emmet,						
Ira,						
Lynn,						
Port Huron,						
Riley,				1,000 00	1	2,000 00
St. Clair,				35,000 00	120	66,000 00
Wales,						
Total,			230	$41,200 00	132	$76,500 00

EMMET COUNTY.—CONTINUED.

Peaine,			17,126	*	16	$14,000 00
			5,381	*	4	1,100 00
Total,			22,507		20	$15,100 00

*Not stated.

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ST. CLAIR COUNTY.—Continued.

MINES WORKED.						
No. of	Kind of Mineral.	Aggregate quantity of Mineral, in pounds, produced the past year.	Aggregate valuation at place of mining of minerals produced the past year.	No of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
						$13,000 00
						7,300 00
						48,740 00
						5,500 00
						150,000 00
						$224,540 00

EMMET COUNTY.—Continued.

						$26,575 00
						2,615 00
						$29,190 00

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ST. JOSEPH COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Burr Oak,	89	77	149	191	61	1	-	-	186	382
Colon,	80	82	128	170	49	3	-	-	172	340
Constantine,	121	116	168	258	83	2	-	-	287	66
Fawn River,	40	40	57	70	25	-	-	-	75	22
Fabius,	67	53	75	109	35	2	-	-	117	25
Florence,	70	77	130	147	52	3	-	-	142	57
Flowerfield,	41	43	66	112	39	1	-	-	124	26
Leonidas,	78	78	147	159	60	1	-	-	152	68
Lockport,	135	112	230	263	75	1	-	-	264	75
Mendon,	77	74	105	136	65	1	-	-	156	302
Mottville,	47	41	84	101	46	3	-	-	112	34
Nottawa,	63	91	166	177	73	-	-	-	185	67
Park,	99	92	143	182	45	2	1	-	132	48
Sherman,	38	35	63	79	42	-	-	-	86	35
Sturges,	76	92	108	252	58	2	1	-	203	110
White Pig'n,	116	89	113	209	61	3	-	-	199	75
Total,	1,237	1,192	1,932	2,615	869	25	2	-	2,592	1,732

TUSCOLA COUNTY.

Arbela,	19	19	25	58	19	-	-	-	50	25
Auchville,	18	15	18	33	12	-	-	-	39	57
Denmark,	15	16	6	38	4	-	-	-	37	5
Indian Fields	4	6	16	29	7	-	-	-	17	45
Rogers,	28	19	35	60	23	2	-	-	58	18
Tuscola,	42	27	47	99	19	1	-	-	87	135
Vassar,	3	6	7	18	5	-	-	-	14	25
Total,	129	108	154	335	89	3	-	-	302	310

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ST. JOSEPH COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Burr Oak,	87	84	109	161	67	1	185	324
Colon,	73	59	110	171	51	2	186	280
Constantine,	112	105	122	279	114	....	286	77
Fawn River,	41	31	56	59	25	1	73	16
Fabius,	55	53	66	101	34	1	121	7
Florence,	70	65	99	136	68	4	148	64
Flowerfield,	67	46	53	104	42	2	129	17
Leonidas,	70	76	103	148	70	....	163	65
Lockport,	96	84	131	263	92	1	271	85
Mendon,	71	56	77	142	66	1	165	248
Mottville,	49	50	69	102	52	1	118	36
Nottawa,	59	57	135	191	78	4	179	82
Park,	94	83	99	165	51	1	134	30
Sherman,	41	33	41	73	41	....	89	25
Sturges,	77	66	122	226	76	5	211	105
White Pig'n,	73	72	68	207	55	....	202	59
Total,	1,135	1,020	1,460	2,528	982	24	2,660	1,520

TUSCOLA COUNTY.—Continued.

Arbela,	20	14	19	38	16	1	49	7
Auchville,	24	21	5	38	10	....	41	58
Denmark,	15	10	4	36	2	2	37	3
Indian Fields	6	5	5	16	6	....	18	18
Rogers,	19	27	23	45	21	....	58	11
Tuscola,	35	30	44	72	19	2	82	115
Vassar,	7	6	6	12	4	....	14	21
Total,	126	113	106	257	78	5	299	233

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ST. JOSEPH COUNTY.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
--	--	2	1	11	21	568	509	--	--	2	1	1,080
1	--	2	---	---	10	512	466	1	--	2	---	981
--	1	2	15	17	8	748	732	--	1	2	15	1,498
--	--	--	---	6	11	232	213	--	--	--	---	445
--	--	--	3	3	2	341	310	--	--	--	3	654
2	--	--	---	6	16	479	442	2	--	--	---	923
1	1	--	---	5	3	302	314	1	1	--	---	618
--	--	2	---	3	17	523	467	--	--	2	---	992
--	--	--	9	14	8	816	667	--	--	--	9	1,492
--	1	--	---	6	14	458	413	--	1	--	---	872
--	--	1	---	10	3	322	323	--	--	1	---	646
1	--	3	---	6	13	570	524	1	--	3	---	1,098
1	--	2	---	9	14	564	493	1	--	2	---	1,060
--	1	1	2	3	1	257	229	--	1	1	2	490
--	--	--	6	3	6	589	572	--	--	--	6	1,167
--	1	--	4	10	10	591	475	--	1	--	4	1,071
6	5	15	40	112	157	7,872	7,149	6	5	15	40	15,087

TUSCOLA COUNTY.—Continued.

--	--	--	---	---	---	140	108	--	--	--	---	248
--	--	1	---	---	---	96	98	--	--	1	---	195
--	--	--	---	1	4	79	69	--	--	--	---	148
--	--	--	---	---	---	62	38	--	--	--	---	100
--	--	--	---	---	3	167	135	--	--	--	---	302
--	--	--	---	13	3	235	202	--	--	--	---	437
--	--	--	---	---	3	39	35	--	--	--	---	74
--	--	1	---	14	13	818	685	--	--	1	---	1,504

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ST. JOSEPH COUNTY.—CONTINUED.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised preceding year
Burr Oak,	21,641	80	5,989	1,700	1,481	29,910
Colon,	20,820	.....	7,011	1,793	1,092	33,740
Constantine,	21,707	.....	7,308	1,573	1,862	41,111
Fawn River,	11,720	.....	3,506	634	882	19,430
Fabius,	20,385	.....	3,999	1,007	882	22,445
Florence,	21,044	.....	10,294	2,289	2,196	64,585
Flowerfield,	20,150	.....	4,404	1,013	739	20,420
Leonidas,	21,273	.....	5,696	1,820	4,950	40,679
Lockport,	22,640	.....	9,683	2,786	1,710	54,820
Mendon,	20,840	.....	7,499	2,120	1,753	43,005
Mottville,	11,760	.....	5,263	1,353	1,819	38,961
Nottawa,	18,454	.....	9,466	2,362	1,789	48,972
Park,	22,054	.....	9,743	2,759	1,989	61,482
Sherman,	21,149	.....	4,315	1,107	931	27,959
Sturges,	12,186	80	6,781	1,990	2,121	58,483
W'te Pigeon	14,720	134	5,713	1,223	1,649	38,480
Total,	302,543	294	106,670	27,529	27,845	644,482

TUSCOLA COUNTY.—CONTINUED.

Arbela,	4,015	.....	206	40	19	480
Auchville,	7,806	.....	217	53	28	654
Denmark,	3,240	.....	178	18	12	100
Indian Fields	4,547	.....	111	28	15	270
Rogers,	7,645	612	404	141	78	150
Tuscola,	13,434	.....	1,124	261	194	4,050
Vassar,	1,226	.....	241	17	21	750
Total,	41,913	612	2,481	558	367	6,454

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ST. JOSEPH COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
1,475	19,297	3,163	7,566	1,227	4,852	43,731
1,591	23,912	4,746	6,426	1,239	8,337	19,603
1,609	22,435	5,672	6,735	1,026	7,286	29,800
896	12,830	1,814	3,044	378	2,055	25,850
804	11,562	4,062	5,559	713	3,227	17,802
1,832	28,621	7,182	8,267	1,481	4,632	64,120
716	10,520	2,683	3,673	385	2,703	71,747
1,226	17,963	3,543	5,212	700	4,359	48,388
2,446	36,589	4,705	8,438	674	6,271	61,989
1,841	28,115	5,009	5,113	1,007	4,016	21,412
1,247	17,331	6,952	3,148	697	3,250	20,848
2,294	36,444	7,041	8,612	1,474	10,292	51,618
2,514	38,090	9,362	9,755	688	7,670	80,797
880	13,917	3,015	5,060	375	2,325	22,195
1,882	28,429	3,810	4,452	891	6,534	56,650
1,423	19,566	3,042	4,994	582	2,573	24,370
24,676	365,621	75,801	96,054	13,537	80,382	660,920

TUSCOLA COUNTY.—Continued.

14	260	258	714	46	26	1,750
5	117	260	2,225	235	-------	-------
4	75	155	180	5	-------	-------
-------	-------	-------	400	------	4	-------
4	565	55	910	22	38	-------
90	2,145	4,210	2,194	245	165	2,175
-------	-------	100	415	10	-------	-------
117	3,162	5,038	7,038	563	233	3,925

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ST. JOSEPH COUNTY.—CONTINUED.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Burr Oak,	23,858	1,350	----------	254	379	143
Colon,	12,156	1,730	----------	257	353	150
Constantine,	18,204	1,640	590	318	190	70
Fawn River,	6,120	1,280	----------	128	113	38
Fabius,	13,864	155	30	193	181	109
Florence,	26,424	840	----------	326	427	84
Flowerfield,	8,040	1,860	40	147	102	69
Leonidas,	15,660	1,344	2,050	238	286	139
Lockport,	16,415	250	----------	347	326	88
Mendon,	11,725	2,100	320	319	370	114
Mottville,	14,929	244	----------	183	275	50
Nottawa,	13,712	1,290	----------	399	552	145
Park,	23,092	487	----------	356	349	75
Sherman,	8,860	620	----------	143	281	118
Sturges,	15,130	2,065	500	295	268	33
White Pig'n,	6,900	250	----------	261	274	74
Total,	235,089	17,505	3,530	4,164	4,726	1,499

TUSCOLA COUNTY.—CONTINUED.

Arbela,	1,325	------	570	14	23	23
Auchville,	1,325	------	----------	9	71	44
Denmark,	1,195	------	360	1	21	28
Indian Fields	----------	------	1,130	4	4	24
Rogers,	50	------	2,083	6	35	63
Tuscola,	3,750	20	1,015	31	58	70
Vassar,	650	------	620	5	4	7
Total,	8,295	20	6,278	70	216	259

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ST. JOSEPH COUNTY.—Continued.

STOCK.				FLOURING MILLS.						
							Power Used.			
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Steam.	Water.	No. of Persons employed.	Amount of Capital invested.
348	1,604	896	--	--	--	-------	----	---	--	----------
301	3,142	822	--	1	3	500	----	1	2	$5,000 00
384	2,668	1,610	--	2	6	4,000	----	2	6	27,000 00
175	1,007	330	--	--	--	-------	----	---	--	----------
224	1,140	666	--	--	--	-------	----	---	--	----------
310	2,145	979	--	--	--	-------	----	---	--	----------
199	1,130	599	--	1	3	*	----	1	1	5,000 00
322	1,873	826	--	1	3	4,695	----	1	2	2,000 00
316	1,889	905	--	2	7	5,524	----	2	6	32,000 00
341	1,705	650	1	--	--	-------	----	---	--	----------
221	1,106	494	--	--	--	-------	----	---	--	----------
467	3061	977	--	1	3	500	----	1	2	6,000 00
369	2,201	1,153	2	--	--	-------	----	---	--	----------
176	665	395	--	--	--	-------	----	---	--	----------
329	2,040	792	--	1	3	2,000	1	---	3	3,000 00
291	1,279	670	--	2	7	3,000	----	2	4	15,000 00
4,773	28,655	12,764	3	11	35	20,219	1	10	26	$95,000 00

*Not stated

TUSCOLA COUNTY.—Continued.

36	8	51	--	--	--	-------	----	---	--	----------
83	------	103	--	--	--	-------	----	---	--	----------
41	------	31	--	--	--	-------	----	---	--	----------
18	------	29	--	--	--	-------	----	---	--	----------
79	15	42	--	--	--	-------	----	---	--	----------
91	97	128	--	1	1	100	----	1	1	$600 00
12	------	7	--	--	--	-------	----	---	--	----------
360	120	391	--	1	1	100	----	1	1	$600 00

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ST. JOSEPH COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Burr Oak,		2	300,000	2		6
Colon,	$1,200 00	2	225,000		2	2
Constantine,	31,000 00	3	850,000		3	9
Fawn River,						
Fabius,		4	1,530,000	1	3	14
Florence,						
Flowerfield,	*	2	350,000		2	2
Leonidas,	40,000 00	4	1,076,500		4	8
Lockport,	32,900 00	1	75,000		1	3
Mendon,		1	*		1	*
Mottville,						
Nottawa,	2,000 00					
Park,		1	150,000		1	1
Sherman,						
Sturges,	10,000 00					
White Pig'n,	15,000 00	1	150,000		1	2
Total,	$132,100 00	21	4,706,500	3	18	47

TUSCOLA COUNTY.—Continued.

Arbela,		1	350,000	1		18
Auchville,						
Denmark,						
Indian Fields		1	500,000		1	14
Rogers,						
Tuscola	*	3	1,800,000		3	18
Vassar,		1	1,200,000		1	8
Total,		6	3,850,000	1	5	58

*Not stated.

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ST. JOSEPH COUNTY.—CONTINUED.

MILLS.		OIL MILLS			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of barrels of Oil made the preceding year	No. of Barrels of Peppermint Oil manufactured the preceding year	No. of—	No. of Barrels of Beer made the preceding year	No. of—	No. of Gallons of Liquor made the preceding year.
$4,500 00	$2,700 00	--	---	------	--	-----	--	------
4,500 00	2,200 00	--	---	------	--	-----	--	------
7,000 00	7,700 00	--	---	------	1	400	1	50,000
----------	----------	--	---	------	--	-----	--	------
6,300 00	11,990 00	--	---	12	--	-----	--	------
----------	----------	--	---	7,194	--	-----	--	------
600 00	1,050 00	--	---	18	--	-----	1	18,000
4,442 50	24,055 00	--	---	------	--	-----	--	------
1,500 00	6,750 00	--	---	3,043	--	-----	--	------
*	*	--	---	155	--	-----	--	------
----------	----------	--	---	------	--	-----	--	------
----------	----------	--	---	------	--	-----	--	------
500 00	1,200 00	--	---	------	--	-----	--	------
----------	----------	--	---	360	--	-----	--	------
----------	----------	--	---	------	--	-----	--	------
500 00	750 00	--	---	------	--	-----	--	------
$29,842 50	$58,395 00	--	---	10,782	1	400	2	68,000

TUSCOLA COUNTY.—CONTINUED.

$8,000 00	*	--	---	------	--	-----	--	------
----------	----------	--	---	------	--	-----	--	------
----------	----------	--	---	------	--	-----	--	------
7,000 00	*	--	---	------	--	-----	--	------
----------	----------	--	---	------	--	-----	--	------
20,000 00	$27,500 00	--	---	------	--	-----	--	------
12,000 00	9,600 00	--	---	------	--	-----	--	------
$47,000 00	$37,100 00	--	---	------	--	-----	--	------

*Not stated.

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ST. JOSEPH COUNTY.—Continued.

TOWNSHIPS.	Distilleries. No. Gallons of Wine made the preceding year.	Distilleries. No. of Barrels of Cider made the preceding year.	Fish. No. of Barrels caught the preceding year.	Aggregate of all kinds of Manufactories. Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Burr Oak,	------	----	----	$1,200 00	2	$1,800 00
Colon,	------	----	----	----------	----	----------
Constantine,	------	15	----	12,500 00	25	9,500 00
Fawn River,	------	----	----	8,000 00	8	1,500 00
Fabius,	------	52	----	----------	----	----------
Florence,	2	125	----	----------	----	----------
Flowerfield,	------	18	----	----------	----	----------
Leonidas,	------	17	----	----------	----	----------
Lockport,	------	----	----	----------	----	----------
Mendon,	------	122	----	----------	----	----------
Mottville,	------	----	----	300 00	1	*
Nottawa,	------	----	----	----------	----	----------
Park,	1	----	----	1,500 00	6	3,000 00
Sherman,	------	----	----	----------	----	----------
Sturges,	------	----	----	----------	----	----------
White Pig'n,	------	----	----	----------	----	----------
Total,	3	349	----	$23,500 00	42	$15,800 00

TUSCOLA COUNTY.—Continued.

Arbela,	------	----	----	----------	----	----------
Auchville,	------	----	----	----------	----	----------
Denmark,	------	----	----	----------	----	----------
Indian Fields	------	----	----	----------	----	----------
Rogers,	------	----	----	----------	----	----------
Tuscola,	------	----	100	$1,000 00	5	$3,200 00
Vassar,	------	----	----	----------	----	----------
Total,	------	----	100	$1,000 00	5	$3,200 00

* Not stated.

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ST. JOSEPH COUNTY.—Continued.

MINES WORKED.						
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in pounds, produced the past year.	Aggregate valuation at place of Mining of Minerals produced the past year	No. of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
						$69,000 00
						12,000 00
						62,764 00
						2,000 00
						13,500 00
						83,350 00
						5,000 00
						18,200 00
						30,519 00
						123,025 00
						52,000 00
						$471,358 00

TUSCOLA COUNTY.—Continued.

						$1,000 00
						$1,000 00

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VAN BUREN COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age	Over Five and under Ten.	Over Ten and under Twenty one	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
*Almena,	-----	-----	-----	-----	-----	--	--	-	-----	-----
Antwerp,	81	67	139	175	61	2	--	-	179	338
Arlington,	37	38	53	69	30	--	--	-	83	17
Bangor,	24	25	36	55	12	1	--	-	56	92
Bloomingd'le	25	30	35	56	18	1	--	-	60	11
Columbia,	29	26	32	75	22	1	--	-	65	122
Decatur,	52	42	68	118	37	2	--	-	136	23
Hamilton,	52	56	71	55	44	3	--	-	68	17
Hartford,	72	42	57	96	34	--	--	-	107	24
Keeler,	49	43	82	87	37	2	--	-	94	206
Lawrence,	46	56	87	109	47	--	--	-	130	213
La Fayette,	115	87	142	240	67	[illegible]	--	-	243	64
Pine Grove,	20	15	23	41	10	--	--	-	42	67
Porter,	29	43	68	93	31	2	--	-	98	168
South Haven	21	19	25	96	12	--	--	-	55	56
Waverly,	29	28	34	57	17	--	--	-	56	18
Total,	681	617	952	1,422	479	18	--	-	1,472	1,436

*Not reported.

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VAN BUREN COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Almena,	----	----	----	----	----	----	----	----
Antwerp,	61	65	71	150	61	2	181	230
Arlington,	36	28	39	61	33	5	89	16
Bangor,	32	30	25	53	14	----	56	93
Bloomingd'le	27	19	25	50	16	1	57	11
Columbus,	35	26	27	55	14	----	65	96
Decatur,	46	40	48	117	42	----	131	20
Hamilton,	17	40	39	78	14	1	69	9
Hartford,	53	50	54	91	32	3	107	20
Keeler,	42	41	63	95	37	----	98	180
Lawrence,	58	57	71	100	40	3	125	205
La Fayette,	84	72	94	226	76	1	239	57
Pine Grove,	14	12	21	32	11	----	43	41
Porter,	45	43	48	88	32	----	99	157
South Haven	11	8	19	39	9	1	38	9
Waverly,	26	18	26	39	25	1	55	11
Total,	584	549	670	1,274	456	18	1,452	1,155

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VAN BUREN COUNTY.—CONTINUED.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
..	..	..	...	...	...	.....	.....	..	..	..	...	.....
..	..	..	12	6	12	525	410	..	..	..	12	947
1	..	..	8	2	6	227	202	1	..	..	8	438
..	..	..	...	2	9	153	154	..	..	..	...	307
1	..	..	...	2	4	165	138	1	..	..	...	304
..	..	..	...	4	4	185	157	..	..	..	...	342
..	..	..	1	5	6	319	293	..	..	..	1	613
..	..	..	...	...	...	281	189	..	..	..	...	470
..	..	..	...	7	10	301	283	..	..	..	...	584
..	..	..	...	5	4	300	278	..	..	..	...	578
..	..	..	4	2	6	345	329	..	..	..	4	678
..	..	..	24	..	20	655	553	..	..	..	24	1,232
..	..	..	...	4	...	109	87	..	..	..	...	196
1	1	1	...	6	7	266	256	1	1	1	...	525
..	..	..	5	6	1	173	87	..	..	..	5	265
..	1	..	...	5	5	165	135	..	1	..	...	301
3	2	1	54	56	94	4,169	3,551	3	2	1	54	7,780

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VAN BUREN COUNTY.—Continued.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year
Almena,	-------	------	-------	-------	------	------
Antwerp,	22,890	126	5,784	1,328	1,595	40,218
Arlington,	18,292	------	1,124	156	305	10,895
Bangor,	5,591	40	682	86	119	5,990
Bloomingd'le	19,532	------	630	138	141	4,150
Columbia,	5,557	------	695	52	262	7,845
Decatur,	8,598	------	2,550	470	441	16,761
Hamilton,	17,672	------	2,571	558	651	19,645
Hartford,	19,272	------	1,957	373	456	14,608
Keeler,	12,568	1	6,529	1,381	899	26,370
Lawrence,	5,511	------	1,427	255	248	9,739
La Fayette,	11,342	------	3,166	728	838	25,532
Pine Grove,	3,614	------	79	11	39	730
Porter,	19,843	------	3,030	728	651	22,681
South Haven	23,105	------	24	3	8	280
Waverly,	3,591	------	590	140	171	4,810
Total,	197,278	167	30,838	6,407	6,824	210,254

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VAN BUREN COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year	No. of Bushels of all other kinds of Grain raised the preceding year	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork manufactured the preceding year
916	11,856	10,501	11,760	360	2,355	92,665
162	2,257	1,922	3,725	323	281	4,821
115	980	1,532	1,529	211	316	7,288
93	1,028	760	2,980	37	106	1,968
59	1,205	1,248	4,303	262	85	550
393	4,802	3,074	1,457	384	1,056	14,830
400	6,580	7,710	6,650	750	3,062	48,900
319	5,173	3,197	4,471	470	1,626	22,091
703	9,349	4,938	11,655	637	2,006	33,187
233	3,348	5,062	4,405	369	1,720	8,643
537	6,932	1,943	6,617	452	2,056	19,260
------	------	110	955	18	------	125
606	8,943	3,349	5,631	428	1,852	14,551
3	40	10	470	------	------	------
83	1,118	1,006	2,598	176	162	1,600
4,622	63,611	46,362	69,206	5,376	16,683	270,479

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VAN BUREN COUNTY.—Continued.

TOWNSHIPS	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the present year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Almena,						
Antwerp,	16,680	1,020	600	196	157	155
Arlington,	7,230	720	9,500	38	111	80
Bangor,	5,700	125	4,294	32	69	56
Bloomingd'le	3,675		2,580	29	52	59
Columbia,	6,701	2,140	2,658	43	70	38
Decatur,	6,855	430	1,231	68	151	83
Hamilton,	12,701			113	308	147
Hartford,	10,351	3,472	7,281	90	247	100
Keeler,	12,625	1,325	1,185	118	212	131
Lawrence,	4,766	1,668	4,383	62	128	66
La Fayette,	6,245	621	3,835	113	174	95
Pine Grove,				17	15	27
Porter,	12,425	235	660	150	204	139
South Haven	1,410		75	9	7	31
Waverly,	3,870	500	2,595	32	48	35
Total,	111,234	12,256	40,877	1,110	1,953	1,242

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VAN BUREN COUNTY.—CONTINUED.

STOCK.				FLOURING MILLS.						
							Power Used.			
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Steam.	Water.	No. of Persons employed.	Amount of Capital invested
274	1,067	592	-	--	--	------	----	---	--	----------
117	117	368	-	--	--	------	----	---	--	----------
81	50	190	-	--	--	------	----	---	--	----------
74	30	180	-	--	--	------	----	---	--	----------
80	18	102	-	--	--	------	----	---	--	----------
150	446	397	-	--	--	------	----	---	--	----------
172	707	274	-	--	--	------	----	---	--	----------
181	618	515	-	--	--	------	----	---	--	----------
130	823	503	-	--	--	------	----	---	--	----------
135	451	424	-	1	2	2,000	----	1	2	$3,000 00
166	743	485	-	2	5	10,000	----	2	15	*
28	-------	50	-	--	--	------	----	---	--	----------
177	1,004	958	-	--	--	------	----	---	--	----------
31	-------	7	-	--	--	------	----	---	--	----------
65	65	145	-	--	--	------	----	---	--	----------
1,861	6,139	5,190	-	3	7	12,000	----	3	17	$3,000 00

* Not stated.

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VAN BUREN COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Almena,						
Antwerp,		3	1,350,000	1	2	16
Arlington,						
Bangor,		1	200,000		1	7
Bloomingd'le						
Columbia,		2	1,700,000	1	1	14
Decatur,						
Hamilton,		2	400,000		2	6
Hartford,		1	300,000		1	3
Keeler,						
Lawrence,	$1,200 00	5	330,000		5	12
La Fayette,	*	1	*		1	*
Pine Grove,		2	1,800,000	2		32
Porter,						
South Haven		4	2,050,000	3	1	40
Waverly,						
Total,	$1,200 00	21	8,630 00	7	14	130

*Not stated.

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VAN BUREN COUNTY.—CONTINUED.

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of Barrels of Oil made the preceding year	No. of Barrels of Peppermint Oil manufactured the preceding year	No. of—	No. of Barrels of Beer made the preceding year	No. of—	No. of Gallons of Liquor made the preceding year
$5,500 00	$10,000 00							
3,000 00	6,000 00							
5,600 00	4,850 00							
400 00	2,400 00							
5,000 00	2,000 00							
6,800 00	10,200 00							
*	*				1	*		
19,000 00	13,100 00							
26,400 00	21,000 00							
$71,700 00	$69,550 00				1			

*Not stated.

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VAN BUREN COUNTY.—CONTINUED.

TOWNSHIPS.	DISTILLERIES.		FISH.	AGGREGATE OF ALL KINDS OF MANUFACTORIES.		
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Almena,						
Antwerp,						
Arlington,						
Bangor,						
Bloomingd'le						
Columbia,				$4,500 00	6	$9,000 00
Decatur,						
Hamilton,						
Hartford,						
Keeler,						
Lawrence,						
La Fayette,						
Pine Grove,						
Porter,						
South Haven						
Waverly,						
Total,				$4,500 00	6	$9,000 00

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VAN BUREN COUNTY.—CONTINUED.

MINES WORKED.						
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in Pounds, produced the past year.	Aggregate valuation at place of mining of minerals produced the past year	No. of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
						$14,000 00
						4,000 00
						76,000 00
						18,000 00
						$112,000 00

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WASHTENAW COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Ann Arbor,	98	117	230	162	139	4	..	.	297	92
" " (c'y)	263	217	366	591	201	2	..	.	400	191
Augusta, ..	74	59	138	127	71	4	..	.	156	37
Bridgewater,	83	80	136	170	98	..	..	.	204	63
Dexter, ...	48	68	113	114	72	3	..	.	132	55
Freedom, ..	98	80	146	163	107	3	..	.	229	368
Lyndon	59	71	127	105	44	6	..	.	115	29
Lodi, ...	87	90	174	177	86	4	1	.	205	60
Lima, ...	67	71	135	158	74	5	..	.	100	58
Manchester,	107	118	176	261	95	2	..	.	247	103
Northfield, .	69	87	203	171	103	9	2	.	118	53
Pittsfield, ..	68	71	55	169	82	10	..	.	179	82
Saline, ...	87	97	187	253	121	5	..	.	.....	.....
Salem, ...	63	89	169	218	114	4	..	.	222	113
Scio, ...	101	103	207	256	109	5	..	.	279	502
Sharon, ...	41	73	150	160	63	1	..	.	158	66
Superior, ...	95	95	122	197	76	3	..	.	191	83
Sylvan, ...	99	63	144	175	79	9	..	.	204	54
Webster, ...	67	66	160	149	80	2	..	.	166	67
York, ...	97	87	171	166	118	3	..	.	244	50
Ypsilanti, ..	248	208	392	657	217	7	..	.	630	251
Total, ...	2,019	2,010	3,701	4,599	2,149	91	3	.	4,476	2,377

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WASHTENAW COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy five and over.	Married.	Unmarried.
Ann Arbor,	120	124	182	282	153	5	295	119
" " (c'y)	226	203	334	677	20	10	457	220
Augusta,	62	68	81	132	70	5	160	34
Bridgewater,	84	87	104	184	96	1	203	72
Dexter,	53	54	82	88	78	4	135	34
Freedom,	105	92	112	162	118	5	247	347
Lyndon,	49	53	69	88	57	7	108	33
Lodi,	89	81	139	165	101	5	204	67
Lima,	65	81	94	148	78	6	97	51
Manchester,	110	101	145	245	108	....	256	93
Northfield,	91	91	131	172	114	3	117	61
Pittsfield,	67	75	106	159	89	3	179	72
Saline,	106	114	167	245	112	4	.....	.....
Salem,	59	78	120	207	180	4	215	106
Scio,	115	108	127	252	100	2	286	418
Sharon,	68	59	108	129	82	2	158	45
Superior,	79	80	104	185	67	....	189	76
Sylvan,	96	77	106	175	83	5	203	60
Webster,	48	61	110	147	83	....	116	45
York,	92	97	147	182	108	4	244	63
Ypsilanti,	219	204	294	658	274	10	630	322
Total,	2,003	1,988	2,862	4,682	2,362	85	4,499	2,338

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WASHTENAW COUNTY.—CONTINUED.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
1	..	2	66	16	20	750	366	1	..	2	66	1,685
..	1	3	34	22	34	1,640	1,661	..	1	3	34	3,339
..	..	..	8	3	4	473	418	..	..	..	8	899
..	..	1	..	4	3	567	556	..	..	1	..	1,124
..	..	..	..	..	3	418	359	..	..	..	..	777
..	..	2	..	13	21	597	594	..	..	2	..	1,193
..	..	..	..	4	2	412	323	..	..	..	..	735
..	1	2	2	11	8	619	589	..	1	2	2	1,204
1	..	..	..	10	9	510	472	1	..	..	..	983
..	..	..	5	17	23	759	709	..	..	..	5	1,473
..	1	..	4	11	12	644	602	..	1	..	4	1,251
..	..	2	8	9	4	455	499	..	..	2	8	964
..	1	..	..	..	..	750	748	..	1	..	..	1,499
1	..	..	..	14	5	657	648	1	..	..	..	1,306
1	..	2	2	23	27	781	704	1	..	2	2	1,490
1	1	..	..	8	6	488	448	1	1	..	..	938
2	..	..	17	4	15	588	515	2	..	..	17	1,122
..	..	..	..	4	5	569	542	..	..	..	..	1,111
1	..	..	..	18	8	524	449	1	..	..	..	974
1	1	2	25	10	10	642	639	1	1	2	25	1,301
2	1	5	72	16	23	1,729	1,659	2	1	5	72	3,468
11	7	21	243	217	242	14,572	13,982	11	7	21	243	28,836

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WASHTENAW COUNTY.—Continued.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year.
Ann Arbor,	20,885	------	8,324	2,683	776	20,910
" " (c'y,)	680	10	680	28	42	1,805
Augusta,	22,440	------	3,321	798	643	17,864
Bridgewater,	17,258	------	9,408	2,460	879	27,162
Dexter,	17,029	------	7,650	1,897	603	16,460
Freedom,	21,994	------	8,535	3,072	714	18,501
Lyndon,	18,427	------	7,276	2,267	519	7,163
Lodi,	22,752	2,537	9,440	2,889	794	12,764
Lima,	19,353	------	6,627	2,580	523	12,739
Manchester,	19,488	40	7,862	2,031	917	18,362
Northfield,	20,889	------	9,046	2,824	756	19,032
Pittsfield,	22,170	123	11,238	2,880	881	20,386
Saline,	18,636	------	9,500	1,873	746	23,665
Salem,	21,000	------	11,500	2,535	1,338	43,278
Scio,	22,434	------	10,682	2,921	776	20,161
Sharon,	20,669	160	9,448	3,159	1,163	27,800
Superior,	22,924	------	10,630	2,456	1,168	33,470
Sylvan,	21,169	160	6,681	2,063	585	11,798
Webster,	18,411	------	9,367	2,622	735	15,570
York,	20,363	------	8,677	2,147	1,144	29,228
Ypsilanti,	21,726	80	12,032	2,743	1,386	40,465
Total,	410,697	3,110	177,924	48,928	17,080	438,583

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WASHTENAW COUNTY.—CONTINUED.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
2,064	38,309	2,062	9,925	1,652	11,197	21,241
56	963	35	3,360	58	1,200	2,100
851	12,610	3,201	6,527	1,387	6,107	21,063
2,433	39,353	2,581	6,817	2,169	20,901	48,247
1,600	28,894	2,163	5,713	2,112	18,551	14,237
2,837	44,433	4,266	6,143	1,970	9,674	15,630
1,849	32,466	1,346	9,173	1,429	7,605	10,700
2,216	34,046	4,072	5,932	1,588	23,013	40,977
2,402	43,326	5,126	6,587	2,152	15,970	11,582
1,831	30,048	4,562	7,927	2,066	13,069	38,426
2,421	40,386	3,898	8,452	2,326	13,071	24,365
2,614	45,360	4,069	6,135	2,332	32,573	34,630
1,854	32,853	3,318	5,152	1,638	27,024	52,101
2,503	50,910	6,360	12,856	1,666	18,836	75,870
2,374	47,050	3,401	10,985	1,807	16,778	27,308
3,060	52,961	5,765	8,647	16,59	21,648	48,474
2,369	42,832	5,461	11,092	2,744	34,689	53,202
1,948	30,112	3,620	7,689	2,307	14,446	12,330
21,43	40,624	2,913	8,767	2,423	15,848	27,086
1,875	28,746	6,170	7,879	1,785	19,869	70,778
2,228	43,290	9,445	14,783	2,417	40,303	66,066
43,528	759,572	83,834	170,541	39,687	387,372	716,413

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WASHTENAW COUNTY.—Continued.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle, other than Oxen and Cows, 1 year old and over.	No. of Work Oxen.
Ann Arbor,	29,630	880	.....	353	313	208
" " (c'y,)	13,035	.....	.....	198	8	4
Augusta, ..	25,110	2,752	465	225	478	193
Bridgewater,	26,665	2,285	650	416	551	207
Dexter, ...	11,815	1,025	.....	204	300	216
Freedom, ..	17,425	3,230	50	278	437	319
Lyndon, ...	10,950	30	.....	144	309	168
Lodi, ...	17,696	2,409	2,125	350	449	245
Lima, ...	23,125	7,100	.....	277	282	167
Manchester,	28,255	1,300	.....	314	428	184
Northfield, .	27,855	640	60	368	572	261
Pittsfield, ..	35,090	2,130	75	361	402	148
Saline, ...	24,905	2,605	.....	351	511	214
Salem, ...	50,040	4,450	1,400	506	696	182
Scio, ...	46,755	400	500	323	538	228
Sharon, ...	30,195	2,300	150	324	361	209
Superior ...	45,435	1,670	2,725	396	412	181
Sylvan, ...	20,661	3,580	.....	213	377	233
Webster, ...	26,180	2,430	.....	287	487	260
York, ...	32,795	19,263	3,805	445	560	157
Ypsilanti, ..	44,365	1,920	740	484	643	220
Total, ...	587,982	62,399	12,745	6,817	9,114	4,204

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WASHTENAW COUNTY.—Continued.

STOCK.				FLOURING MILLS.						
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.	Amount of Capital invested
463	6,306	646	1	3	8	43,500	----	3	10	$27,000 00
269	371	62	2	1	2	4,000	----	1	2	16,000 00
432	2,476	538	-	--	--	--------	----	---	--	------------
526	6,476	797	-	--	--	--------	----	---	--	------------
292	5,087	586	-	2	6	2,000	1	1	9	26,000 00
514	3,841	690	-	--	--	--------	----	---	--	------------
331	3,400	480	-	--	--	--------	----	---	--	------------
499	9,310	869	1	--	--	--------	----	---	--	------------
393	6,211	517	-	--	--	--------	----	---	--	------------
396	6,656	646	-	3	10	15,200	----	3	18	34,000 00
465	5,476	846	-	--	--	--------	----	---	--	------------
423	9,207	533	-	--	--	--------	----	---	--	------------
432	2,355	661	-	2	6	7,900	----	2	5	11,000 00
501	5,212	803	-	--	--	--------	----	---	--	------------
457	6,800	615	2	3	7	32,000	----	3	13	31,000 00
368	7,095	551	-	1	2	200	----	1	2	4,000 00
532	10,458	666	-	--	--	--------	----	---	--	------------
459	5,304	595	-	1	2	*	----	1	1	5,000 00
398	5,861	656	-	1	4	6,000	----	1	3	12,000 00
578	5,856	874	-	1	3	1,800	----	1	2	5,000 00
588	7,209	844	-	4	16	28,000	----	4	12	64,000 00
9,321	120,967	13,475	6	22	66	140,600	1	21	77	$235,000 00

*Not stated.

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WASHTENAW COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Ann Arbor,	$235,500 00	5	809,113	2	3	10
" " (c'y)	26,000 00	--	----------	----	---	------
Augusta,	----------	4	930,000	1	3	9
Bridgewater,	----------	2	370,000	----	2	2
Dexter,	10,900 00	1	200,000	----	1	2
Freedom,	----------	--	----------	----	---	------
Lyndon,	----------	--	----------	----	---	------
Lodi,	----------	3	370,000	1	2	4
Lima,	----------	1	100,000	----	1	2
Manchester,	91,000 00	3	700,000	----	3	8
Northfield,	----------	--	----------	----	---	------
Pittsfield,	----------	--	----------	----	---	------
Saline,	*	3	800,000	2	1	4
Salem,	----------	3	600,000	2	1	3
Scio,	4,100 00	3	800,000	----	3	6
Sharon,	100 00	1	160,000	----	1	2
Superior,	----------	1	1,300,000	1	1	6
Sylvan,	*	3	*	----	3	3
Webster,	*	1	100,000	----	1	1
York,	1,000 00	2	200,000	----	1	3
Ypsilanti,	172,000 00	3	1,860,000	----	3	16
Total,	$540,600 00	39	9,299,113	9	30	81

* Not stated.

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WASHTENAW COUNTY.—CONTINUED.

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of Barrels of Oil made the preceding year	No. of Barrels of Peppermint Oil manufactured the preceding year	No. of—	No. of Barrels of Beer Made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.
$6,300 00	6,693 00	--	----	----	--	------	--	----
----------	----------	--	----	----	2	2,500	--	----
*	5,325 00	--	----	----	--	------	--	----
2,600 00	*	--	----	----	--	------	--	----
1,000 00	*	--	----	----	--	------	--	----
----------	----------	--	----	----	--	------	--	----
----------	----------	--	----	----	--	------	--	----
6,700 00	11,060 00	--	----	----	--	------	--	----
5,000 00	1,000 00	--	----	----	--	------	--	----
4,600 00	6,400 00	--	----	----	1	1,500	1	----
----------	----------	--	----	----	--	------	--	----
----------	----------	--	----	----	--	------	--	----
4,000 00	*	--	----	----	--	------	--	----
4,000 00	4,800 00	--	----	----	--	------	--	----
1,300 00	700 00	--	----	----	--	------	--	----
300 00	240 00	--	----	----	--	------	--	----
2,400 00	800 00	--	----	----	--	------	--	----
*	*	--	----	----	--	------	--	----
1,350 00	*	--	----	----	--	------	--	----
1,800 00	600 00	--	----	----	--	------	--	----
16,000 00	18,600 00	--	----	----	--	------	--	----
$52,850 00	$56,218 00	--	----	----	3	4,000	1	----

*Not stated.

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WASHTENAW COUNTY.—Continued.

TOWNSHIPS.	Distilleries. No. of Gallons of Wine made the preceding year.	Distilleries. No. of Barrels of Cider made the preceding year.	Fish. No. of Barrels caught the preceding year.	Aggregate of all kinds of Manufactories. Amount of Capital invested	Aggregate of all kinds of Manufactories. No. of Persons employed.	Aggregate of all kinds of Manufactories. Value of Products for the past year.
Ann Arbor,	------	21	----	$27,500 00	47	$34,000 00
" " (c'y)	------	----	----	97,160 00	349	211,350 00
Augusta,	------	----	----	----------	----	----------
Bridgewater,	------	----	----	----------	----	----------
Dexter,	------	----	----	----------	----	----------
Freedom,	------	----	----	200 00	2	900 00
Lyndon,	------	----	----	----------	----	----------
Lodi,	------	170	----	----------	----	----------
Lima,	------	----	----	----------	----	----------
Manchester,	------	----	----	5,000 00	8	3,000 00
Northfield,	------	----	----	----------	----	----------
Pittsfield,	------	---	----	----------	----	----------
Saline,	------	----	----	----------	----	----------
Salem,	20	122	----	----------	----	----------
Scio,	------	75	----	5,000 00	6	1,300 00
Sharon,	------	----	----	----------	----	----------
Superior,	------	----	----	----------	----	----------
Sylvan,	------	----	----	1,000 00	3	*
Webster,	------	----	----	3,300 00	2	*
York,	------	----	----	----------	----	----------
Ypsilanti,	------	----	----	----------	----	----------
Total,	20	388	----	$139,160 00	417	$250,550 00

*Not stated.

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WASHTENAW COUNTY.—Continued.

MINES WORKED.							
No. of—	Kind of Mineral	Aggregate quantity of Mineral, in pounds, produced the past year	Aggregate valuation at place of mining of minerals produced the past year	No of Persons employed	Amount of Capital invested		Value of all Merchandize imported the preceding year for the purpose of sale
							$278,550 00
							51,000 00
							51,800 00
							245,000 00
							$626,350 00

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WAYNE COUNTY.

TOWNSHIPS.	NO. OF MALES.									
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Twenty-one.	Over Twenty-one and under Forty-five.	Over Forty-five and under Seventy-five.	Over 75 and under 90.	Over Ninety and under 100.	One Hundred and over.	Married.	Unmarried.
Brownstown,	110	96	149	169	83	2	..	.	189	67
Canton,	84	93	190	192	116	3	..	.	239	72
Detr't 1st w'd	374	371	484	1,280	130	5	..	.	728	693
" 2d "	131	141	216	655	95	3	1	.	300	469
" 3d "	250	233	338	648	127	8	..	1	407	261
" 4th "	406	270	356	903	158	13	1	.	819	219
" 5th "	568	582	441	1,091	61	12	4	1	757	222
" 6th "	754	798	803	1,548	112	18	11	3	1,429	481
" 7th "	489	388	473	966	225	7	1	.	936	201
" 8th "	665	833	715	776	119	4	..	.	756	141
Dearborn,	119	124	202	256	113	6	..	.	272	98
Ecorse,	72	58	83	103	57	8	..	.	119	32
Greenfield,	168	203	213	289	165	16	..	.	353	101
Grosse Point,	144	109	190	250	103	15	..	.	246	101
Huron,	47	46	65	93	40	1	..	.	107	185
Hamtramck,	276	269	304	539	129	7	1	.	400	139
Livonia,	99	114	213	205	134	11	..	.	260	64
Monguagon,	89	83	140	199	66	4	..	.	174	98
Nankin,	124	147	216	273	150	6	..	.	308	13
Plymouth,	165	172	312	447	185	10	..	.	480	811
Redford,	154	115	242	229	138	5	..	.	291	584
Romulus,	85	72	117	141	69	...	2	.	173	40
Springwells,	200	177	174	416	74	5	1	.	361	123
Sumpter,	39	27	77	70	43	1	..	.	91	23
Taylor,	29	27	51	69	30	1	..	.	68	30
Van Buren,	89	112	208	245	94	...	..	.	260	63
Total,	5,730	5,660	6,972	12052	2,816	171	22	5	10523	5336

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WAYNE COUNTY.—Continued.

TOWNSHIPS.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Brownstown,	79	80	112	170	74	2	200	56
Canton,	108	70	150	193	103	12	242	65
Detr't 1st w'd	315	299	530	1,199	192	7	761	608
" 2d "	131	138	234	492	106	4	309	281
" 3d "	246	270	287	717	158	38	402	395
" 4th "	414	257	380	959	193	94	819	405
" 5th "	389	502	446	970	115	124	765	247
" 6th "	525	772	672	1,457	113	47	1,339	511
" 7th "	402	351	475	985	287	21	936	370
" 8th "	467	610	890	860	214	6	791	284
Dearborn,	99	98	142	233	119	1	275	75
Ecorse,	43	75	69	105	33	....	115	14
Greenfield,	154	217	182	261	154	12	349	50
Grosse Point,	116	109	100	212	76	12	246	30
Huron,	31	39	45	88	47	....	107	143
Hamtramck,	241	244	242	502	130	2	416	36
Livonia,	100	99	163	222	133	28	256	112
Monguagon,	68	59	102	156	52	3	16	56
Nankin,	131	121	176	278	155	4	323	3
Plymouth,	169	152	264	450	218	4	497	760
Redford,	118	139	172	251	149	3	307	524
Romulus,	75	60	74	143	70	5	172	41
Springwells,	176	146	131	336	97	3	357	55
Sumpter,	36	32	40	62	42	1	88	17
Taylor,	35	29	45	53	28	....	68	16
Van Buren,	98	97	130	236	113	3	239	80
Total,	4,766	5,065	6,253	11,590	3,171	436	10,395	5,284

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WAYNE COUNTY.—Continued.

NO OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year.	Number of Deaths preceding year.	No. of Males.	No. of Females.	No. of Blind.	No. of Deaf and Dumb.	No. of Insane or Idiotic.	No. of Colored Persons.	TOTAL.
..	..	1	11	13	8	609	517	..	..	1	11	1,138
..	1	3	...	11	12	678	636	..	1	3	...	1,318
..	..	..	13	14	105	2,644	2,542	..	..	..	13	5,199
..	..	..	32	6	34	1,242	1,105	..	..	..	32	2,379
1	..	1	56	47	61	1,605	1,716	1	..	1	56	3,379
1	1	12	340	100	150	2,107	2,297	1	1	12	340	4,758
1	..	1	22	18	22	2,760	2,546	1	..	1	22	5,330
8	12	11	206	16	1	4,047	3,586	8	12	11	206	7,870
4	..	2	196	85	103	2,549	2,521	4	..	2	196	5,272
2	..	..	25	34	104	3,112	3,047	2	..	..	25	6,186
..	1	..	4	2	5	820	692	..	1	..	4	1,517
..	..	2	2	6	4	381	325	..	..	2	2	710
1	..	1	17	7	5	1,054	980	1	..	1	17	2,053
..	..	2	1	4	4	811	625	..	..	2	1	1,439
..	1	1	1	10	5	292	250	..	1	1	1	545
1	..	..	3	26	29	1,525	1,361	1	..	..	3	2,890
2	2	1	1	10	13	776	745	2	2	1	1	1,527
..	1	..	11	3	16	581	440	..	1	..	11	1,033
1	1	18	3	22	22	916	865	1	1	18	3	1,804
1	..	3	1	23	35	1,291	1,257	1	..	3	1	2,553
..	..	2	3	9	7	883	832	..	..	2	3	1,720
1	..	..	2	...	12	486	427	1	..	..	2	916
..	..	..	...	...	10	1,047	889	..	..	..	...	1,936
1	..	1	...	12	4	257	213	1	..	1	...	472
..	2	..	9	7	1	207	190	..	2	..	9	408
..	..	1	...	9	11	748	677	..	..	1	...	1,426
25	22	63	959	494	783	33,428	31,281	25	22	63	959	65,778

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WAYNE COUNTY.—Continued.

TOWNSHIPS.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised preceding year
Brownstown,	13,001	------	2,830	522	252	5,850
Canton,	18,837	------	7,134	1,560	1,390	40,840
Detr't 1st w'd	-------	------	-------	-------	------	------
" 2d w'd	-------	------	-------	-------	------	------
" 3d w'd	-------	------	-------	-------	------	------
" 4th w'd	-------	------	-------	-------	------	------
" 5th w'd	480	------	310	-------	------	------
" 6th w'd	-------	------	-------	-------	------	------
" 7th w'd	-------	------	-------	-------	------	------
" 8th w'd	-------	------	-------	-------	------	------
Dearborn,	20,878	------	5,514	439	738	20,992
Ecorse,	16,857	------	2,046	234	166	3,036
Greenfield,	29,998	------	8,432	329	508	12,032
Grosse Point,	20,993	------	5,909	484	376	9,798
Huron,	8,965	------	1,520	287	354	8,929
Hamtramck,	18,706	59	4,558	74	203	5,742
Livonia,	21,647	7	10,453	1,325	1,319	27,625
Monguagon,	18,458	------	4,769	434	258	6,395
Nankin,	16,421	------	4,846	884	992	24,314
Plymouth,	19,976	------	12,872	2,937	1,510	56,760
Redford,	19,984	------	8,585	1,129	1,025	29,313
Romulus,	12,633	------	2,449	452	504	7,508
Springwells,	8,813	------	4,000	160	600	13,100
Sumpter,	22,149	------	1,415	253	318	6,123
Taylor,	15,120	------	1,341	167	228	3,770
Van Buren,	21,464	------	6,468	1,525	1,064	33,097
Total,	325,380	66	95,451	13,195	11,805	315,224

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WAYNE COUNTY.—Continued.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year.	No. of Bushels of all other kinds of Grain raised preceding year.	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year.
509	6,690	3,746	4,420	1,111	2,716	4,335
1,228	21,256	11,825	12,204	2,040	14,953	109,415
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	50	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
...	...	...	...	...	...	...
378	6.549	9,972	18,391	1,738	6,238	37,557
276	2,694	3,884	4,597	790	2,187	2,055
212	4,160	13,499	14,234	2,873	2,974	15,658
488	7,760	20,051	13,171	1,770	768	800
291	5,011	2,709	4,841	866	1,442	9,260
81	1,571	7,945	13,766	1,607	314	56,390
875	13,600	12,686	29,932	1,855	17,042	52,787
768	7,224	10,111	3,703	854	11,876	29,765
735	11,765	8,059	29,240	1,755	9,075	75,685
2,373	42,333	10,759	33,693	2,377	25,275	125,371
1,372	14,467	18,633	25,073	2,214	8,406	62,488
289	3,051	3,037	6,010	965	2,187	7,413
97	900	4,600	4,210	400	1,000	800
152	1,695	1,670	3,773	488	911	2,320
188	1,703	1,979	5,624	849	1,334	5,006
1,079	18,831	6,462	15,003	1,737	6,783	32,817
11,391	171,260	15,627	241,885	26,339	115,472	629,922

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WAYNE COUNTY.—Continued.

TOWNSHIPS.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the preceding year.	LIVE		
				No. of Horses 1 year old and over.	No. of Neat Cattle other than Oxen and Cows, one year old and over.	No. of Work Oxen.
Brownstown,	5,570	488	150	419	383	130
Canton,	28,150	16,460	965	455	633	194
Detr't 1st w'd						
" 2d w'd						
" 3d w'd				78		
" 4th w'd				127		
" 5th w'd				30	75	40
" 6th w'd				75		20
" 7th w'd				93		
" 8th w'd				4	7	
Dearborn,	40,870	350	115	434	446	157
Ecorse,	4,069		130	294	273	41
Greenfield,	26,430			502	445	183
Grosse Point,	650			556	206	106
Huron,	15,855	340	40	177	250	99
Hamtramck,	17,860	2,000		459	118	39
Livonia,	42,295	44,170	2,798	485	466	130
Monguagon,	15,160		308	287	279	31
Nankin,	39,796	2,565	460	387	304	144
Plymouth,	80,930	13,500	2,780	621	758	211
Redford,	54,086	1,730	200	483	336	202
Romulus,	23,425	46		218	382	116
Springwells,	600			370	170	108
Sumpter,	12,100	50	100	108	256	72
Taylor,	12,125	100	23	170	289	48
Van Buren,	36,595	940	465	341	387	122
Total,	456,566	82,739	8,539	7,173	6,463	2,243

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WAYNE COUNTY.—Continued.

STOCK.				FLOURING MILLS.						
							Power Used.			
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Steam.	Water.	No. of Persons employed.	Amount of Capital invested.
356	1,431	494	..	1	3	450	....	1	2	$4,500 00
648	5,606	798	..	1	3	5,000	1	...	4	10,000 00
.....	.....	.....	..	1	3	13,000	1	...	6	15,000 00
.....	.....	.....	..	..	..	.....	....	...	..	.....
16	.....	.....	..	..	..	.....	....	...	..	.....
33	.....	.....	..	..	..	.....	....	...	..	.....
300	.....	50	..	..	..	.....	....	...	..	.....
81	.....	40	..	..	..	.....	....	...	..	.....
30	.....	.....	..	..	..	.....	....	...	..	.....
57	.....	6	..	..	..	.....	....	...	..	.....
586	2,382	568	..	1	2	1,500	....	1	1	9,000 00
248	1,247	391	..	..	..	.....	....	...	..	.....
676	1,206	779	..	..	..	.....	....	...	..	.....
527	351	666	..	..	..	.....	....	...	..	.....
279	359	303	..	..	..	.....	....	...	..	.....
535	131	426	..	..	..	.....	....	...	..	.....
692	5,949	636	..	..	..	.....	....	...	..	.....
236	3,720	495	..	1	2	2,000	1	...	3	5,000 00
569	3,791	543	..	1	4	*	....	1	4	6,000 00
792	8,939	861	..	5	13	25,000	....	5	12	40,300 00
745	3,545	708	..	1	1	*	....	1	*	*
422	1,000	419	..	..	..	.....	....	...	..	.....
445	500	380	..	..	..	.....	....	...	..	.....
209	502	281	..	..	..	.....	....	...	..	.....
204	436	217	..	..	..	.....	....	...	..	.....
578	2,493	722	..	1	2	2,000	....	1	1	6,000 00
9,264	44,088	9,783	..	13	33	48,950	3	10	33	$95,800 00

* Not stated.

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WAYNE COUNTY.—Continued.

TOWNSHIPS.	Value of Products for the past year.	SAW				
		No. of—	No. of Feet of Lumber sawed the past year.	Power Used. Steam.	Power Used. Water.	No. of Persons employed.
Brownstown,	$3,500 00	2	*	1	1	10
Canton,	2,500 00	3	182,260	3	...	14
Detr't 1st w'd	100,000 00	..	.....	....	...	.....
" 2d "	.....	..	.....	....	...	.....
" 3d "	.....	2	6,500,000	2	...	30
" 4th "	.....	..	.....	....	...	.....
" 5th "	.....	..	.....	....	...	.....
" 6th "	.....	..	.....	....	...	.....
" 7th "	.....	1	5,715,950	1	...	62
" 8th "	.....	..	.....	....	...	.....
Dearborn,	900 00	4	1,660,000	2	2	10
Ecorse,	.....	..	.....	....	...	.....
Greenfield,	.....	4	3,600,000	4	...	34
Grosse Point,	.....	..	.....	....	...	.....
Huron,	.....	1	120,000	1	...	4
Hamtramck,	.....	7	13,000,000	7	...	149
Livonia,	.....	3	430,000	2	1	4
Monguagon,	200 00	2	2,000,000	2	...	28
Nankin,	5,000 00	4	1,400,000	4	...	15
Plymouth,	12,500 00	5	765,000	....	5	5
Redford,	*	4	*	2	2	*
Romulus,	.....	3	1,700,000	3	...	25
Springwells,	.....	3	*	3	...	30
Sumpter,	.....	1	300,000	1	...	6
Taylor,	.....	1	150,000	1	...	3
Van Buren,	8,000 00	5	2,800,000	2	3	13
Total,	$132,600 00	55	40,323,210	41	14	442

*Not stated.

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WAYNE COUNTY.—CONTINUED.

MILLS.		OIL MILLS			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of barrels of Oil made the preceding year	No. of Barrels of Peppermint Oil manufactured the preceding year	No. of—	No. of Barrels of Beer made the preceding year	No. of—	No. of Gallons of Liquor made the preceding year
$9,500 00	$10,300 00	--	----	----	--	------	--	----
6,800 00	7,660 00	--	----	----	--	------	--	----
----------	----------	--	----	----	1	2,500	--	----
----------	----------	--	----	----	--	------	--	----
100,000 00	650,000 00	--	----	----	1	5,000	--	----
----------	----------	--	----	----	2	3,000	--	----
----------	----------	--	----	----	4	2,000	--	----
----------	----------	1	2000	----	2	10,000	--	----
50,000 00	54,115 00	--	----	----	2	2,500	--	----
----------	----------	--	----	----	1	3,062	--	----
6,300 00	10,000 00	--	----	----	--	------	--	----
----------	----------	--	----	----	--	------	--	----
16,000 00	35,200 00	--	----	----	--	------	--	----
----------	----------	--	----	----	--	------	--	----
2,000 00	600 00	--	----	----	--	------	--	----
66,000 00	112,000 00	--	----	----	--	------	--	----
2,150 00	7,600 00	--	----	----	--	------	--	----
14,000 00	32,000 00	--	----	----	--	------	--	----
9,000 00	13,000 00	--	----	----	--	------	--	----
4,500 00	2,750 00	--	----	----	--	------	--	----
*	*	--	----	----	--	------	--	----
12,000 00	15,000 00	--	----	----	--	------	--	----
*	*	--	----	----	--	------	--	----
2,000 00	200 00	--	----	----	--	------	--	----
2,000 00	*	--	----	----	--	------	--	----
20,000 00	16,420 00	--	----	----	--	------	--	----
322,250 00	966,845 00	1	2000	----	13	28,062	--	----

* Not stated.

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WAYNE COUNTY.—Continued.

TOWNSHIPS.	Distilleries. No. Gallons of Wine made the preceding year.	Distilleries. No. of Barrels of Cider made the preceding year.	FISH. No. of Barrels caught the preceding year.	Aggregate of all kinds of Manufactories. Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Brownstown,	....	....	....	.....	.....	.....
Canton,	....	....	....	.....	.....	.....
Detr't 1st w'd	....	....	....	$518,000 00	991	$190,000 00
" 2d w'd	....	....	....	443,000 00	1,648	355,000 00
" 3d w'd	....	....	....	116,000 00	205	334,900 00
" 4th w'd	....	....	....	170,000 00	156	335,800 00
" 5th w'd	....	....	....	100,000 00	310	*
" 6th w'd	....	....	....	40,000 00	100	18,000 00
" 7th w'd	200	....	....	157,000 00	369	547,000 00
" 8th w'd	....	....	....	136,150 00	28	32,500 00
Dearborn,	....	....	....	.....	.....	.....
Ecorse,	....	....	570	.....	.....	.....
Greenfield,	....	....	....	*	*	900 00
Grosse Point,	....	260	52	.....	.....	.....
Huron,	....	....	....	.....	.....	.....
Hamtramck,	....	....	....	20,000 00	37	80,000 00
Livonia,	....	....	....	380 00	8	2,800 00
Monguagon,	....	....	525	2,000 00	8	1,500 00
Nankin,	....	....	....	.....	.....	.....
Plymouth,	....	....	....	52,250 00	114	73,500 00
Redford,	....	....	....	.....	.....	.....
Romulus,	....	....	....	.....	.....	.....
Springwells,	....	....	....	.....	.....	.....
Sumpter,	....	....	....	.....	.....	.....
Taylor,	....	....	....	.....	.....	.....
Van Buren,	....	....	....	.....	.....	.....
Total,	200	260	1147	$1,755,780 00	3,974	$1,971,900 00

*Not stated.

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WAYNE COUNTY.—Continued.

MINES WORKED.							
No. of—	Kind of Mineral	Aggregate quantity of Mineral, in pounds, produced the past year	Aggregate valuation at place of Mining of Mineral produced the past year	No. of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale	
							$799,000 00
							6,257,000 00
							78,700 00
							3,000 00
							200,000 00
							78,000 00
							7,000 00
							108,000 00
							$7,530,700 00

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RECAPITULATION.

COUNTIES.	NO. OF MALES.										NO. OF FEMALES.	
	Under Five years of age	Over Five and under Ten	Over Ten and under Twenty one	Over Twenty-one and under Forty-five	Over Forty-five and under Seventy-five	Over 75 and under 90	Over Ninety and under 100	One Hundred and over			Married	Unmarried
Allegan,	735	611	903	1,481	440	11	1				1,461	651
Barry,	701	614	899	1,440	426	13	2				1,475	836
Berrien,	1,242	1,074	1,552	2,371	838	18	..				2,332	3,001
Branch,	1,202	1,167	2,036	2,639	979	30	2				2,512	1,460
Calhoun,	1,640	1,626	2,933	4,044	1,317	36	..				3,973	3,521
Cass,	998	1,059	1,590	1,973	774	34	..				2,125	941
Chippewa,	117	109	128	810	186	5	1				327	812
Clinton,	781	688	984	1,306	504	18	1				1,496	976
Eaton,	935	940	1,346	1,804	661	28	..				1,731	568
*Emmet,	249	259	377	308	104	23	4	1			227	81
Genesee,	1,242	1,168	2,018	2,808	947	46	5				2,749	2,090
Grand Traverse,	64	53	75	333	42	....	..				159	231
Hillsdale,	1,612	1,552	2,389	3,280	1,071	45	2				3,494	1,241
Houghton,	213	114	173	1,395	31	....	..				468	881
Huron,	38	72	62	295	8	....	..				98	375
Ingham,	951	844	1,471	1,875	663	27	1				2,042	2,612
Ionia,	988	884	1,234	1,836	624	19	..				1,980	1,408
Jackson,	1,607	1,544	2,991	3,883	1,466	60	2				3,768	3,666
Kalamazoo,	1,231	1,235	2,068	3,200	1,083	28	..				3,049	3,135
Kent,	1,545	1,332	1,956	3,379	1,032	26	2	1			3,371	3,945
Lapeer,	987	742	1,203	1,668	585	20	..				1,649	1,081
Lenawee,	2,437	2,312	3,780	5,543	2,049	85	4				5,650	3,988
Livingston,	1,070	1,132	1,936	2,275	949	33	1				2,460	1,191
Mackinac,	145	96	172	374	93	6	1				281	512
Macomb,	1,483	1,465	2,325	2,895	1,191	63	3				3,070	2,307
Monroe,	1,669	1,372	2,337	2,856	1,094	61	8				2,683	1,092
Montcalm,	180	139	263	427	133	6	..				406	265
Newaygo,	85	79	91	290	47	....	..				181	153
Oakland,	2,463	2,341	4,071	5,147	2,215	111	1				5,161	3,287
Ontonagon,	191	114	200	2,220	44	....	..				595	1,794
Ottawa,	716	448	825	1,736	422	5	..				1,320	1,569
†Saginaw,	110	74	93	236	54	2	..				185	83
Saulac,	269	296	367	822	157	3	..				531	825
Shiawassee,	679	611	1,011	1,189	461	21	..				1,268	1,044
St. Clair,	1,570	1,348	1,897	3,307	887	47	1				2,995	3,656
St. Joseph,	1,237	1,192	1,932	2,615	869	25	2				2,592	1,732
Tuscola,	129	108	154	335	89	3	..				302	310
Van Buren,	617	577	952	1,422	479	18	..				1,472	1,436
Washtenaw,	2,019	2,010	3,701	4,599	2,119	91	3				4,476	2,377
Wayne	5,730	5,660	6,972	12,052	2,816	171	22	5			10,523	5,336
Total,	41,991	39,101	61,467	92,468	30,009	1238	69	7			86,717	66,472

*Township of Galilee not reported.
†Only three towns reported.

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RECAPITULATION.—CONTINUED.

COUNTIES.	NO. OF FEMALES.							
	Under Five years of age.	Over Five and under Ten.	Over Ten and under Eighteen.	Over Eighteen and under Forty.	Over Forty and under Seventy-five.	Seventy-five and over.	Married.	Unmarried.
Allegan,	639	496	665	1,275	524	5	1,451	387
Barry,	652	530	704	1,274	512	22	1,469	673
Berrien,	1,170	951	1,279	2,228	848	24	2,372	2,637
Branch,	1,199	1,189	1,502	2,653	1,048	40	2,574	1,321
Calhoun,	1,618	1,495	2 151	4,009	1,582	66	4,003	3,206
Cass,	910	914	1,309	1,963	835	52	2,132	799
Chippewa,	90	82	92	250	63	-------	218	222
Clinton,	716	569	681	1,242	529	11	1.529	796
Eaton,	866	784	1,090	1,718	750	18	1.652	463
Emmet,	218	269	371	320	123	51	215	75
Genesee,	1,255	1,154	1,435	2,503	1,010	38	2,771	1,776
Grand Traverse,	60	48	53	131	41	-------	145	35
Hillsdale,	1,414	1,447	1,803	3,187	1,293	56	3,585	1,101
Houghton,	204	116	88	500	34	-------	354	186
Huron,	27	39	45	110	5	1	94	132
Ingham,	923	807	1,063	1,807	714	41	2,108	2,301
Ionia,	939	816	1,038	1,663	654	19	1,950	1,310
Jackson,	1,486	1,460	2 026	3,647	1,478	70	3,824	3,122
Kalamazoo,	1,158	1,099	1.578	2.822	1,160	37	2,991	2,562
Kent,	1,522	1,227	1,593	3,050	1,086	30	3,436	3,438
Lapeer,	791	691	843	1,547	571	8	1,680	817
Lenawee,	2,140	2,068	2,877	5,292	2,256	98	5,397	3,530
Livingston,	1,101	1,025	1,388	2,216	984	31	2,451	1,022
Mackinac,	168	112	122	280	66	4	271	430
Macomb,	1,452	1,268	1,679	2,873	1,272	54	3,180	2,021
Monroe,	1,522	1,295	1,784	2,791	1,186	55	2,715	1,094
Montcalm,	141	140	187	318	119	3	395	117
Newaygo,	72	69	68	147	30	-------	132	12
Oakland,	2,231	2,306	3,116	5,082	2,537	106	5,174	3,070
Ontonagon,	185	81	81	477	28	-------	379	10
Ottawa,	586	449	561	1,145	402	7	1,302	884
Saginaw,	113	64	58	183	64	-------	175	36
Sanilac,	337	263	276	601	126	1	568	561
Shiawassee,	551	513	716	1,133	509	14	1,222	666
St. Clair,	1,441	1,195	1,462	2.717	914	39	2 901	2,874
St. Joseph,	1,135	1,020	1,460	2,528	982	24	2,660	1,520
Tuscola,	126	113	106	257	78	5	299	233
Van Buren,	58	519	670	1,274	456	18	1,452	1,155
Washtenaw,	2,003	1,988	2,862	4,682	2,362	85	4,499	2,338
Wayne,	4,766	5,065	6,253	11 590	3,171	436	10,395	5,284
Total,	38,519	35,760	47,140	83,488	32,402	1,569	86,150	54,156

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RECAPITULATION.—Continued.

NO. OF.						POPULATION.						
Blind.	Deaf and Dumb.	Insane or Idiotic.	Colored Persons.	Number of Marriages preceding year	Number of Deaths preceding Year	No of Males	No. of Females	No. of Blind	No. of Deaf and Dumb	No. of Insane or Idiotic	No. of Colored Persons	TOTAL.
2	6	6	1	69	84	4,182	3,604	2	6	6	1	7,801
1	3	13	15	85	57	4,095	3,694	1	3	13	15	7,821
4	5	14	231	106	140	7,095	6 500	4	5	14	231	13.849
3	8	13	14	134	188	8,055	7.631	3	8	13	14	15,724
11	4	20	216	163	221	11,596	10.921	11	4	20	216	22,768
4	9	8	692	141	139	6,428	5,9+3	4	9	8	692	13,124
1		2	26	3	19	1,356	577	1		2	26	1.962
2	1	5	4	50	48	4,282	3,748	2	1	5	4	8,042
4	8	8	5	132	105	5,714	5,226	4	8	8	5	10,966
		2	-----	13	14	1,325	1,352			2	----	2,679
2	12	8	25	124	128	8,234	7.395	2	12	8	25	15,676
	1		10	9	20	567	333		1		10	911
3	6	7	21	89	126	9,951	9,200	3	6	7	21	19,188
1			4	15	23	1,926	942	1			4	2,873
			-----	---	----	475	227				----	702
1	4	10	15	69	104	5,832	5,360	1	4	10	15	11,222
3	3	7	-----	77	53	5,585	5,129	3	3	7	----	10,727
22	14	23	76	219	207	11,553	10,167	22	14	23	76	21,855
8	8	15	113	114	155	8.895	7,854	8	8	15	113	16,893
2	4	17	60	177	192	9.273	8,513	2	4	17	60	17,869
5	7	6	30	61	99	5.205	4,451	5	7	6	30	9,704
9	16	28	154	205	219	16,210	14.731	9	16	28	154	31,148
7	6	12	19	121	160	7,396	6,745	7	6	12	19	14,185
2		1	3	8	17	887	752	2		1	3	1.645
8	14	25	44	130	125	9,425	8,593	8	14	25	44	18,114
8	11	13	60	123	158	9,397	8,633	8	11	13	60	18,122
	1	3	-----	15	36	1,148	908		1	3	----	2,060
	1		-----	7	7	592	386		1		----	979
10	10	31	76	219	231	16.379	15,378	10	10	31	76	31,884
			38	---	----	2,769	855				38	3,662
2		7	35	43	85	4,152	3,141	2		7	35	7,337
		2	-----	22	22	569	4,82			2	----	1,053
1		1	6	16	12	1,914	1,607	1		1	6	3,529
2	1	5	-----	30	33	3,972	3,439	2	1	5	----	7,419
3	7	15	47	147	180	9,057	7,763	3	7	15	47	16,897
6	5	15	40	112	157	7,872	7,149	6	5	15	40	15,087
		1	-----	14	13	818	685			1	----	1.504
3	2	1	51	55	91	4,169	3,551	3	2	1	54	7,780
11	7	21	243	217	242	14,572	13,9+2	11	7	21	243	28 836
25	22	63	959	491	783	33,428	31,281	25	22	63	959	65,778
176	206	428	3,336	3,859	4,742	266,350	238,878	176	206	428	3,336	509,374

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RECAPITULATION.—Continued.

COUNTIES.	LAND.					
	Whole No. of Acres taxable	No. of Acres owned by individuals or companies, not taxable	No. of Acres improved	No. of Acres sowed with Wheat	No. of Acres of Corn harvested preceding year	No. of Bushels of Corn raised the preceding year
Allegan,	176,499	740	22,978	5,665	7,818	113,504
Barry,	197,264	122	27,897	9,864	7,026	148,879
Berrien,	217,183	205	46,058	10,339	12,158	402,935
Branch,	274,526	286	69,485	19,077	13,415	373,820
Calhoun,	322,262	4,102	121,023	39,241	16,072	389,021
Cass,	226,930	129	67,960	19,988	21,858	576,439
Chippewa,	3,465		369			
Clinton,	200,960	440	28,870	8,286	4,496	118,686
Eaton,	266,769	73	37,253	10,345	5,160	106,951
Emmet,	3,733	16	871	28	107	2,086
Genesee,	232 069	408	54,058	14,278	7,093	113,972
Grand Traverse,	59,209		111		13	250
Hillsdale,	310,315	1,044	95,830	25,882	13,614	345,604
Houghton,	47,079	20,961	1,005			
*Huron						
Ingham,	200,967	5	44,864	14,275	6,033	104,964
Ionia,	243,836	456	47,296	13,274	6,605	151,680
Jackson,	383,437	275	140,674	50,410	17,189	374,824
Kalamazoo,	297,118	238	95,636	24,855	17,317	563,741
Kent,	308,213	886	62,054	14,483	8,977	207,728
Lapeer,	294,626	82	44,291	11,140	6,616	120,754
Lenawee,	346,352	208	143,296	32,624	23,236	501,353
Livingston,	311,791	1,569	101,147	29,506	10,204	200,779
Mackinac,	5,581		594	40		
Macomb,	225,327	324	85,415	14,226	14,064	229,473
Monroe,	249,265	1,401	60,775	13,947	9,745	179,435
Montcalm,	128,913	89	5,977	1,789	932	19,601
Newaygo,	69,030	10,080	3,058	337	465	5,144
Oakland,	489,225	1,802	213,728	57,258	23,801	478,696
Ontonagon,	46,553	22,115	1,184		1	100
Ottawa,	190,838	160	13,378	1,927	2,838	62,498
Saginaw,	61,928	6,792	2,672	574	253	6,903
Sanilac,	66,640	340	6,788	639	175	3,616
Shiawassee,	145,185		36,043	7,960	4,111	64,947
St. Clair,	36,423	627	22,258	2,803	1,993	47,278
St. Joseph,	302,543	294	106,670	27,529	27,845	644,482
Tuscola,	41,913	612	2,481	558	367	6,454
Van Buren,	197,278	167	30,838	6,407	6,824	210,254
Washtenaw,	410,697	3,110	177,924	48,928	17,080	438,583
Wayne,	325,380	66	95,451	13,195	11,805	315,224
Total,	7,917,322	80,215	2,111,660	551,677	327,356	7,630,658

*Not reported.

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RECAPITULATION.—CONTINUED.

PRODUCE.						
No. of Acres of Wheat harvested preceding year.	No. of Bushels of Wheat raised the preceding year	No. of Bushels of all other kinds of Grain raised the preceding year	No. of Bushels of Potatoes raised the preceding year.	No. of Tons of Hay cut the preceding year.	No. of Pounds of Wool sheared preceding year.	No. of Pounds of Pork marketed the preceding year
4,610	55,965	23,151	52,033	5,549	13,356	120,061
8,176	109,444	37,219	57,449	9,499	28,685	126,622
8,422	139,295	67,034	94,310	8,421	31,748	671,370
14,964	207,974	56,763	92,543	15,510	68,317	221,013
31,543	480,649	109,136	124,120	25,258	189,261	470,910
16,407	209,022	303,437	96,988	15,012	71,741	1,161,553
		1,233	2,203	317		6,690
6,736	98,738	44,923	53,791	6,997	14,096	110,599
9,596	112,928	37,518	40,482	9,529	25,710	177,130
111		6,574	38,174	164	28	32,571
10,178	164,106	74,127	58,191	19,118	90,497	226,947
12		300	1,820	43		
22,120	341,247	63,417	105,194	19,328	98,715	378,949
		3,700	14,200	350		
11,094	145,609	36,377	55,444	13,003	32,947	176,090
11,992	171,162	70,332	91,599	8,114	39,553	239,605
46,063	654,201	95,840	146,968	34,109	199,653	416,738
20,880	353,811	130,734	95,206	13,967	137,610	875,049
12,360	170,281	98,991	128,900	14,092	36,683	210,351
8,747	141,863	54,298	50,680	10,355	54,607	278,281
28,253	446,102	108,923	155,281	38,706	224,363	962,487
25,192	360,425	64,024	114,533	25,202	108,594	232,446
		719	3,796	153		
16,303	200,665	163,594	120,290	20,322	151,952	533,849
13,558	163,077	63,912	77,586	23,772	63,011	194,513
1,594	17,150	12,154	13,036	398	2,150	18,225
594	4,446	831	2,642	80	167	3,200
49,175	779,044	184,361	244,178	42,551	356,107	795,911
850	2,540	4,002	29,120	207		600
1,227	19,571	21,542	42,511	6,863	2,022	106,075
337	7,216	9,356	5,022	610	281	1,600
541	10,930	22,927	13,649	2,216	1,552	9,975
6,111	74,171	26,381	33,629	10,655	21,364	81,495
1,482	23,074	69,928	77,142	10,068	15,835	136,277
24,676	365,621	75,801	96,051	13,537	80,382	660,920
117	3,162	5,038	7,038	563	233	3,925
4,622	63,611	46,262	69,206	5,376	16,683	270,479
43,528	759,572	83,834	170,541	39,687	387,372	716,413
11,392	171,260	15,627	241,885	26,340	115,479	629,922
473,571	7,027,932	2,294,420	2,917,434	496,041	2,689,747	11,258,845

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RECAPITULATION.—Continued.

COUNTIES.	No. of Pounds of Butter made the preceding year.	No. of Pounds of Cheese made the preceding year.	No. of Pounds of Sugar manufactured the present year.	LIVE: No. of Horses 1 year old and over.	LIVE: No. of Neat Cattle, other than Oxen and Cows, one year old and over.	LIVE: No. of Work Oxen.
Allegan,	102,881	6,239	95,341	851	2,286	1,286
Barry,	143,618	7,705	95,555	1,073	12,469	1,553
Berrien,	154,137	13,356	31,271	2,713	3,792	1,510
Branch,	289,752	17,368	64,779	2,992	4,793	2,495
Calhoun,	397,490	27,260	14,852	3,939	5,294	3,151
Cass,	185,510	21,790	47,704	3,269	3,979	1,115
Chippewa,	100		3,700	54	6	42
Clinton,	157,677	6,783	125,185	969	2,920	1,775
Eaton,	205,018	19,915	213,195	1,457	3,021	1,856
Emmet,	3,383	15	57,268	57	82	30
Genesee,	290,204	37,826	57,946	2,401	3,962	2,381
Grand Traverse,			100	42	14	135
Hillsdale,	362,032	45,962	71,508	4,010	4,867	3,134
Houghton,				98		59
Huron,						
Ingham,	218,652	12,945	93,611	1,571	3,559	2,219
Ionia,	180,292	23,352	124,368	1,462	3,805	2,117
Jackson,	435,682	24,737	100	4,604	6,886	4,147
Kalamazoo,	283,652	19,164	27,388	4,668	5,763	1,878
Kent,	275,407	14,802	114,362	2,102	4,178	2,897
Lapeer,	192,667	21,448	65,854	1,676	2,202	1,691
Lenawee,	550,569	83,749	34,545	7,519	10,878	3,561
Livingston,	307,896	20,902	13,608	2,933	5,389	3,430
Mackinac,	650		17,170	76	29	28
Macomb,	371,682	34,713	17,650	4,504	5,255	2,121
Monroe,	289,732	48,067	11,619	4,500	6,950	2,234
Montcalm,	17,297	88	14,246	166	338	446
Newaygo,	1,690	100	800	96	44	146
Oakland,	747,664	73,506	17,022	8,073	9,650	5,212
Ontonagon,	500			161	24	172
Ottawa,	72,870	1,516	44,324	381	1,350	1,278
Saginaw,	6,287		2,160	69	137	125
Sanilac,	13,739	180	5,497	311	234	466
Shiawassee,	132,612	16,062	43,787	1,724	2,489	1,560
St. Clair,	134,388	5,061	12,978	1,659	2,116	1,336
St. Joseph,	235,089	17,505	3,530	4,164	4,726	1,499
Tuscola,	8,295	20	6,278	70	216	259
Van Buren,	111,234	12,256	40,877	1,110	1,953	1,242
Washtenaw,	587,982	62,399	12,745	6,817	9,114	4,204
Wayne,	456,566	82,739	8,539	7,173	6,463	2,243
Total,	7,924,896	779,530	1,611,462	91,564	141,253	67,033

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RECAPITULATION.—Continued.

STOCK.				*FLOURING MILLS.					
							Power Used.			
No. of Milch Cows.	No. of Sheep.	No. of Swine over 6 months old.	No. of Mules.	No. of—	No. Runs of Stone.	No. of Barrels of Flour made the preceding year.	Steam.	Water.	No. of Persons employed.	Amount of Capital invested
2,106	5,454	3,891	2	5	12	12,380		5	10	$24,500 00
2,463	11,754	4,583	2	2	4	3,500		2	4	7,000 00
3,594	11,531	11,812	1	8	13	45,800	1	7	16	26,500 00
4,987	27,147	10,906	10	6	19	14,870	1	5	11	15,200 00
6,324	68,443	10,949	3	13	42	113,240		13	40	287,021 00
3,953	24,462	13,663	4	6	8	7,360		6	11	15,500 00
57	12	50								
2,728	5,368	4,941		1	2	1,500		1		7,000 00
3,472	9,578	5,695		5	12	8,300		5	18	31,500 00
71	26	54								
4,449	32,638	6,473	3	11	23	31,756		11	22	62,600 00
47	13	49	6							
6,151	40,788	11,845	3	9	21	37,250	2	4	20	82,500 00
20	12	37	11							
3,804	13,472	6,088	3	4	10	13,450		4	3	20,560 00
3,387	13,848	6,169	2	8	14	17,850	1	7	13	28,500 00
6,838	68,774	10,508	11	14	39	121,850	4	10	49	147,000 00
4,955	46,257	10,398	1	12	18	27,500		12	19	50,000 00
4,751	14,908	6,946		7	15	30,620		7	20	26,500 00
2,624	20,079	4,386	2	6	12	15,000	1	5	8	20,000 00
9,496	78,618	15,130	2	17	54	85,686	3½	9½	45	132,000 00
5,433	42,917	7,779	3	15	29	31,393		15	22	71,000 00
86	36	36	2							
5,873	52,197	8,259		9	23	24,840	1	7	17	42,300 00
5,549	23,361	9,302	3	7	18	17,640	2	5	19	26,900 00
441	1,014	742		1	1			1	2	
105	41	182		2	3	125		1	2	1,500 00
11,831	135,283	14,878	8	25	64	99,640	2	23	56	218,025 00
46	6	204	5							
1,646	888	2,974	2	2	3	1,500		2	3	3,000 00
248	56	389		1	1	600		1	2	3,000 00
493	646	518	6	1	4			1	2	2,000 00
2,686	8,472	4,750		3	6	5,884		3	8	23,000 00
2,767	6,294	3,633	2	4	6	7,100	1	3	8	24,000 00
4,773	28,655	12,764	3	11	35	20,219	1	10	26	95,600 00
360	120	391		1	1	100		1	1	600 00
1,861	6 139	5,190		3	7	12,000		3	17	3.000 00
9,321	120,967	13,475	6	22	66	140,600	1	21	77	235.000 00
9,264	44,088	9,783		13	33	48 950	3	10	33	95.800 00
139,260	934,333	239,832	106	254	618	998,503	24½	220½	604	$1,828,006 00

*Nine Mills—power used not stated.

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RECAPITULATION.—CONTINUED.

COUNTIES.	Value of Products for the past year.	†SAW				
		No. of	No. of Feet of Lumber sawed the past year.	Power Used.		No. of Persons employed.
				Steam.	Water.	
Allegan,	$58,100 00	29	13,105,000	6	23	140
Barry,	1,000 00	22	4,090,000	4	18	33
Berrien,	285,000 00	45	15,645,171	11	28	201
Branch,	86,750 00	32	6,043,000	9	23	87
Calhoun,	561,365 00	34	4,416,000	7	27	58
Cass,	20,780 00	25	4,327,000	3	19	43
Chippewa,		1	500,000		1	10
Clinton,	1,200 00	8	1,572,000		8	23
Eaton,	11,800 00	18	4,874,000	2	16	39
Emmet,		2	71,000	1	1	5
Genesee,	167,343 00	26	12,095,000	5	21	122
Grand Traverse,		12	20,100,000	5	7	217
Hillsdale,	5,000 00	47	11,708,500	14	27	93
Houghton,		9	670,000	4	5	23
Huron,						
Ingham,	1,500 00	15	3,651,000	6	9	48
Ionia,	46,500 00	18	5,650,000	1	16	55
Jackson,	222,750 00	22	2,800,000	6	16	36
Kalamazoo,	85,500 00	30	7,035,000	10	20	58
Kent,	147,901 00	36	13,650,000	4	29	181
Lapeer,	68,840 59	32	15,105,000	8	23	143
Lenawee,	273,462 00	54	13,161,720	17	32	127
Livingston,	146,510 00	26	3,170,000	5	21	40
Mackinac,		2	2,350,000	1	1	30
Macomb,	37,100 00	32	12,699,000	16	14	155
Monroe,	22,480 00	31	6,072,000	11	20	88
Montcalm,	3,000 00	13	7,000,000		13	95
Newaygo,	200 00	7	5,340,000	4	3	142
Oakland,	440,400 00	46	5,340,900	9	36	93
Ontonagon,		4	3,270,000			56
Ottawa,	815 00	40	59,650,000	15	25	626
Saginaw,	1,500 00	2	1,500	1	1	8
Sanilac,	1,000 00	16	13,330,000	8	7	290
Shiawassee,	29,681 75	5	1,300,000	1	4	11
St. Clair,	34,000 00	39	46 320,000	16	23	445
St. Joseph,	132,100 00	21	4,706,500	3	18	47
Tuscola,		6	3,850,000	1	5	58
Van Buren,	1,200 00	21	8,630,000	7	14	130
Washtenaw,	540,600 00	39	9,299,113	9	30	81
Wayne,	132,660 00	55	40,323,210	41	14	442
Total,	$3,567,978,34	922	392,920,714	271	618	4,679

†Thirty-three mills, power used not stated.

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RECAPITULATION.—CONTINUED.

MILLS.		OIL MILLS.			BREWERIES.			
Amount of Capital invested	Value of Products for the past year	No. of—	No. of Barrels of Oil made the preceding year.	No. of Barrels of Peppermint Oil manufactured the preceding year.	No. of—	No. of Barrels of Beer made the preceding year.	No. of—	No. of Gallons of Liquor made the preceding year.
$71,600 00	$84,160 00							
20,500 00	8,405 00							
91,700 00	128,130 00							
44,700 00	37,925 00							
33,600 00	30,741 00	1	203				1	20,000
44,500 00	19,394 00						1	1,200
4,000 00								
15,800 00	13,700 00							
24,500 00	16,500 00							
2,450 00	900 00							
79,925 00	71,401 00				1	400		
70,800 00	132,100 00							
51,200 00	95,570 00						1	1,000
10,500 00	12,750 00							
24,600 00	15,380 00							
17,300 00	40,720 00						1	4,000
24,650 00	17,500 00				1	500		
49,950 00	23,080 00				2		3	70,400
80,350 00	128,150 00				1	700		
77,100 00	81,538 00							
78,050 00	84,673 00							
28,100 00	16,753 00						1	5,600
6,000 00	16,800 00							
81,150 00	91,168 00						1	88,000
62,500 00	38,950 00				4	1,880		
36,500 00	46,800 00							
99,300 00	14,690 00							
159,200 00	49,050 00				1	450	1	2,140
29,000 00	36,500 00							
14,310 00	218,550 00	1	3					
8,600 00	14,000 00							
135,000 00	104,700 00							
9,200 00	6,950 00							
332,900 00	391,300 00							
29,842 50	58,395 00			10,782	1	400	2	68,000
47,000 00	37,100 00							
71,700 00	69,550 00				1			
52,850 00	56,948 00				3	4,000	1	
322,250 00	966,815 00	1	2,000		13	28,062		
$2,442,577 50	3,273,036 00	3	2,203	10,782	28	36,392	13	260,340

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RECAPITULATION.—CONTINUED.

COUNTIES.	DISTILLERIES.		FISH.	AGGREGATE OF ALL KINDS OF MANUFACTORIES.		
	No. of Gallons of Wine made the preceding year.	No. of Barrels of Cider made the preceding year.	No. of Barrels caught the preceding year.	Amount of Capital invested	No. of Persons employed.	Value of Products for the past year.
Allegan,		41½		$11,000 00	13	$22,000 00
Barry,	12					
Berrien,				16,700 00	54	40,300 00
Branch,	3	46	10	2,500 00		1,500 00
Calhoun,	279	75		147,750 00	188	154,700 00
Cass,		157		3,000 00	5	2,000 00
Chippewa,						
Clinton,						
Eaton,				10,900 00	36	22,950 00
Emmet,			22,597		20	15,100 00
Genesee,				16,600 00	19	15,500 00
Grand Traverse,			188	900 00	6	2,300 00
Hillsdale,		6		115,750 00	32	2,310 00
Houghton,			100			
Huron,						
Ingham,				19,875 00	45	23,250 00
Ionia,			4	9,700 00	25	6,100 00
Jackson,	40	115	10	1,6 000	4	1,800 00
Kalamazoo,		12				
Kent,				113,300 00	176	197,600 00
Lapeer,				1,800 00	12	2,000 00
Lenawee,		18		134,400 00	169	319,322 00
Livingston,	80			600 00	1	200 00
Mackinac,			19,011	1,400 00	12	4,500 00
Macomb,	50	203	215	30,250 00	87	46,615 00
Monroe,		550	350	94,700 00	99	127,200 00
Montcalm,				800 00	4	1,000 00
Newaygo,			75			
Oakland,	528	609		99,050 00	138	245,125 00
Ontonagon,			170			
Ottawa,			666	16,900 00	23	17,990 00
Saginaw,			20	500 00	10	1,900 00
Sanilac,			2,400			
Shiawassee,				9,850 00	15	4,500 00
St. Clair,			230	41,200 00	132	76,500 00
St. Joseph,	3	349		23,500 00	42	15,800 00
Tuscola,			100	1,000 00	5	3,200 00
Van Buren,				4,500 00	6	9,000 00
Washtenaw,	20	388		139,160 00	417	250,550 00
Wayne,	200	260	1,147	1,755,780 00	3,974	1,971,900 00
Total,	1,215	2,829½	47,203	$2,832,965 00	5,769	$3,694,712 00

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RECAPITULATION.—CONTINUED.

MINES WORKED.						
No. of—	Kind of Mineral.	Aggregate quantity of Mineral, in Pounds, produced the past year.	Aggregate valuation at place of mining of minerals produced the past year	No. of Persons employed.	Amount of Capital invested	Value of all Merchandize imported the preceding year for the purpose of sale.
						$111.573 00
						72,450 00
						302.655 00
						319,078 00
1	Iron.	1,310,000	$32,750 00			522,759 59
						212,700 00
						40,230 00
						29,190 00
						295,052 00
						16,000 00
						398,300 00
29	Copper.	3,447,881	669,531 34	1,135	$848,000 00	12,600 00
	Coal.	120,000	180 00	8	50 00	97,300 00
						150,900 00
						7,000 00
						783,790 50
						61,650 00
						275,016 00
						122,160 00
						6,800 00
						233,024 00
						343,750 00
						30,500 00
						13,600 00
						149,836 00
	Copper.	1,540,000	269,500 00	1,169	3,899,900 00	
						72,250 00
						72,000 00
						12,000 00
						67,810 00
						224,540 00
						471,358 00
						1,000 00
						112,000 00
						626,350 00
						7,530,700 00
30		6,417,881	962,961 34	2,312	$4,747,950 00	$13,733,122 09

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RECAPITULATION.

COUNTIES.	DWELLING HOUSES.		Number of Families.	NUMBER OF INHABITANTS.					Value of Real Estate owned.
	Whole Number.	Number in Cities.		Whole Number.	Colored.	Deaf and Dumb.	Blind.	Insane.	
Allegan,	996	.....	1,044	5,127	5	4	1	6	$898,385
Barry,	1,040	.....	1,055	5,072	8	2	2	3	740,074
Berrien,	2,127	.....	2,156	11,417	215	4	1	8	2.180,506
Branch,	2,400	.....	2,469	12,472	14	.....	.....	3	2,096,483
Calhoun,	3,684	.....	3,762	19,169	196	5	6	5	4,037,480
Cass,	1,915	.....	1,931	10,906	387	4	.....	5	1,924,804
Chippewa,	187	.....	187	898	15	.....	.....	.....	101,930
Clinton,	947	.....	951	5,102	2	.....	1	1	627,705
Eaton,	1,325	.....	1,351	7,058	3	4	1	1	1,051,432
Genesee,	2,253	.....	2,267	12,051	14	.....	6	7	2,141,912
Hillsdale,	2,965	.....	3,026	16,159	5	3	2	1	3,159,337
Houghton,	116	.....	116	798	.....	.....	.....	.....	*52,810
Huron,	.....	.....	.....	†207	.....	.....	.....	.....	.....
Ingham,	1,597	.....	1,693	8,643	18	2	3	.....	1,258,786
Ionia,	1,374	.....	1,393	7,597	.....	1	1	1	985,995
Jackson,	3,543	.....	3,583	19,433	61	10	2	8	4,196,958
Kalamazoo,	2,191	.....	2,210	13,179	97	5	.....	6	2,971,250
Kent,	2,246	489	2,246	12,017	30	2	4	2	2,015,447
Lapeer,	1,287	.....	1,296	7,026	6	2	5	1	1,186,162
Lenawee,	4,911	.....	4,958	26,380	91	11	11	19	5,671,348
Livingston,	2,366	.....	2,370	13,475	.....	4	6	3	2,057,245
Macomb,	2,664	.....	2,711	15,532	27	1	4	7	2,872,316
Mackinac,	581	.....	607	3,597	31	.....	.....	.....	301,094
Marquette,	18	.....	18	136	.....	.....	.....	.....	*4,250
Mason,	12	.....	12	93	.....	.....	.....	.....	19,205
Midland,	10	.....	10	65	.....	.....	.....	.....	4,195
Montcalm,	164	.....	165	891	.....	.....	.....	.....	122,250
Monroe,	2,536	476	2,556	14,695	54	8	12	4	2,309,446
Newaygo,	92	.....	92	510	.....	.....	.....	.....	54,250
Oakland,	5,557	.....	5,601	31,267	60	6	5	16	7,619,091
Oceana,	58	.....	58	300	10	.....	.....	.....	16,400
Ontonagon,	46	.....	46	389	5	.....	.....	.....	*81,250
Ottawa,	1,128	.....	1,134	5,587	35	1	.....	2	580,890
Saginaw,	483	.....	508	2,609	.....	.....	.....	.....	283,893
Sanilac,	420	.....	420	2,222	.....	.....	1	.....	222,550
Schoolcraft,	5	.....	5	16	.....	.....	.....	.....	*2,620
Shiawassee,	972	.....	972	5,233	.....	.....	.....	.....	856,6[illegible]
St. Clair,	1,817	.....	1,817	10,411	23	3	.....	1	1,338,730
St. Joseph,	2,303	.....	2,316	12,717	23	2	1	2	2,797,[illegible]7
Tuscola,	65	.....	65	291	.....	.....	.....	1	65,575
Van Buren,	965	.....	1,006	5,804	2	.....	1	.....	868,210
Washtenaw,	5,080	.....	5,080	28,569	117	6	17	7	7,214,755
Wayne,	7,049	3,144	7,406	42,765	699	15	15	15	7.318,794
Total,	71,515	4,009	72,560	397,965	2,265	105	108	129	$74,938,340

*Balance reported with Chippewa.

† Balance reported with Sanilac.

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RECAPITULATION.—Continued.

COUNTIES.	OCCUPIED FARMS.					LIVE STOCK.		
	Whole Number.	Acres Improved.	Acres Unimproved.	Cash Value of—	Value of Farming Implements and Machinery.	Horses.	Asses and Mules.	Milch Cows.
Allegan,	270	12,419	25,015	$405,100	$23,560	320	--	762
Barry,	750	24,752	63,057	622,193	28,439	618	--	502
Berrien,	694	34,282	57,976	1,049,746	59,486	1,609	2	1,912
Branch,	1,463	64,141	87,886	1,609,370	74,541	1,726	5	3,276
Calhoun,	1,834	119,255	138,262	*2,984,926	129,067	3,525	3	6,366
Cass,	952	59,998	80,520	1,502,701	77,082	2,065	--	2,617
Chippewa,	48	838	12,232	52,000	4,082	88	7	71
Clinton,	652	21,825	49,527	549,825	31,278	528	--	1,552
Eaton,	747	*27,476	55,762	715,252	45,151	712	1	1,858
Genesee,	1,476	54,024	91,548	1,595,560	83,814	1,654	--	3,663
Hillsdale,	1,411	78,940	85,433	2,060,125	117,682	2,690	--	3,885
Houghton,	-----	-----	-----	-----	-----	-----	--	-----
Huron,	-----	-----	-----	-----	-----	-----	--	-----
Ingham,	1,084	40,149	80,846	981,125	46,089	815	--	2,419
Ionia,	613	30,067	46,891	746,740	28,649	711	2	1,580
Jackson,	2,252	148,330	165,603	3,503,885	155,888	3,457	7	6,191
Kalamazoo,	1,000	73,047	80,133	1,997,320	142,767	2,353	--	3,034
Kent,	885	35,522	72,536	1,004,801	57,388	791	--	2,163
Lapeer,	628	34,903	39,543	782,240	49,588	933	--	1 656
Lenawee,	2,471	138,331	136 852	4,102,495	201,324	4,752	4	7,530
Livingston,	1 653	103,862	119,747	2,287,470	119,375	2 217	8	4,531
Macomb,	1,317	74,783	86,532	2,222,845	101,502	2,540	2	4,407
Mackinac,	14	554	1,776	15,800	866	22	--	56
Marquette,	-----	-----	-----	-----	-----	-----	--	-----
Mason,	-----	-----	-----	-----	-----	-----	--	-----
Midland,	4	207	1,281	13,575	525	9	--	10
Montcalm,	26	1,711	3,408	35,400	2,020	49	--	72
Monroe,	1,284	57,559	81,219	1,580,213	117,927	2,835	--	4,061
Newaygo,	12	646	699	8,200	725	7	--	26
Oakland,	3,559	234,428	269,574	6,541,689	385,874	6,507	1	*10,597
Oceana,	-----	-----	-----	-----	-----	-----	--	-----
Ontonagon,	-----	-----	-----	-----	-----	-----	--	-----
Ottawa,	204	4,914	19,128	181,497	8,961	90	--	538
Saginaw,	79	2 940	7,891	104,976	5,224	145	--	289
Sanilac,	88	3,612	4,944	78,850	4,391	78	--	248
Schoolcraft,	-----	-----	-----	-----	-----	-----	--	-----
Shiawassee,	746	31.203	56,681	734.965	32.939	654	--	1,701
St. Clair,	500	37,060	50.175	636.283	37,525	821	--	1,738
St. Joseph,	1,354	94,266	99,930	2,526,567	125,710	2,815	1	3,786
Tuscola,	13	300	4,520	29 800	747	7	--	29
Van Buren,	488	21 013	36,142	510 615	41 001	550	--	1,172
Washtenaw,	2,546	179,714	159.547	4,979,342	229.257	5.735	--	7,917
Wayne,	1 632	83.213	106.873	3.158.575	156 617	4.214	1	5.342
Total,	34,879	1,9.0,354	2,419,529	51,914,644	2.748,311	57,842	44	97,587

*True amounts.—Errors occured in footing by townships.

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RECAPITULATION.—Continued.

JUNE 1, 1850.					PRODUCE, DURING			
Working Oxen.	Other Cattle.	Sheep.	Swine.	Value of Live Stock.	Wheat, Bushels of—	Rye, Bushels of—	Indian Corn, Bushels of—	Oats, Bushels of—
518	1,107	4,425	1,503	$67,929	25,116	1,631	52,305	16,711
451	1,816	3,486	4,312	121 519	19.871	929	111 609	40,442
347	2,36[illegible]	11,302	7,199	161,800	88 263	144	227 650	74,175
1,867	4,351	21,864	6,830	254.504	155.742	1.079	323,270	118,474
3,778	6,357	49,663	11,360	507.217	390,774	3,565	331,209	164.765
1,046	2,947	17,670	8,398	212 262	159,997	126	42,740	122.000
98	53	19	111	15 620	.....	.....	30	1.010
1,125	2.083	5.085	4,788	108 671	54.297	328	64.967	38,960
1,288	2.563	8,857	4.055	*116.416	59.830	667	69 630	44.280
2,521	4.574	25.665	6.145	267,064	121 20.	1,382	126,497	86.585
1,953	4,982	27,862	7,199	323,808	220,161	1,542	247,530	135,487
.....	.....	.....	.....	.....	.....	.....	.....	.....
1,896	2.464	11,523	4.062	166 942	81,687	423	95.270	58.414
1,266	2 365	8,447	3,336	128,030	76.946	2,543	75.945	44 003
4,321	6,269	51,094	11,590	501.013	476 617	5.266	268 725	177,237
1,868	4,330	37,674	9,113	246.156	227,813	2 605	374,994	98.063
1,641	2,649	8,114	4 813	174.997	69,300	4,117	93.610	59 822
1,155	2.344	16,462	3,435	165 021	84.831	1,999	52 505	52.935
2,792	10,321	70,385	12,151	622 214	313,529	3,235	393.516	177.331
3,421	4,767	32,282	8,740	382.078	303,594	15,474	173.197	86,894
1,575	5,241	35,582	7,593	311.896	132,136	2,287	160,306	157,624
20	58	.....	46	3,035	.....	.....	.....	770
.....	.....	.....	.....	.....	.....	.....	.....	.....
16	15	37	40	1.294	300	.....	1 650	200
63	66	469	158	6.575	3.781	340	4.570	2 660
2,046	5,110	19,925	10,984	286.308	114,340	997	199.323	89,835
26	28	3	130	2.275	327	.....	5.200	380
6,924	10,608	113,804	17,633	920,273	603,789	29,854	479,458	280,538
.....	.....	.....	.....	.....	.....	.....	.....	.....
287	837	192	1,349	21,848	3,814	262	24.264	3.510
144	387	777	479	21.536	4.420	106	13,915	4,235
192	272	774	389	17,070	7,157	10	5,298	7,531
.....	.....	.....	.....	.....	.....	.....	.....	.....
1,385	2.062	7,087	3.262	133.739	61,834	650	56.505	32.705
821	1.977	6,477	1,562	95.346	20,285	942	42 942	60,673
1,599	4,485	22,305	10,406	318,118	256,505	4,501	404,628	111,311
29	31	113	53	1.986	470	80	1,076	315
750	1.562	6,260	3.317	99 810	75,115	1,426	132 780	34.718
4,469	9 6[illegible]9	92,964	16 588	662 835	522.728	6 370	379 965	*213,570
2,002	5,892	32.424	9.422	398,315	105.567	7.370	284.032	214.882
56,203	117,043	756,382	202,588	7,852,550	4,893,141	102,960	5,704,172	1,843,134

*True amounts.—Errors occurred in footing by townships.

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RECAPITULATION.—CONTINUED.

THE YEAR ENDING JUNE 1, 1850.

COUNTIES.	Barley, Bushels of—	Buckwheat, Bushels of—	Potatoes, Bushels of—	Wool, Pounds of—	Value of Orchard products.	Butter, Pounds of—	Cheese, Pounds of—	Hay, Tons of—
Allegan,	1,006	2,026	43,721	13,154	$2,582	64,060	6,899	3,312
Barry,	1,572	3,021	51,837	21,959	190	110,966	13,752	6,449
Berrien,	260	3,249	60,215	28,633	6,681	123,346	12,531	6,186
Branch,	2,289	15,271	113,108	58,325	4,306	257,469	23,809	10,899
Calhoun,	12,819	21'778	158,510	126,589	5,427	359,675	42,578	18,623
Cass,	1,475	4,396	64,625	48,343	3,355	185,215	22,700	3,853
Chippewa,			8,200					366
Clinton,	161	8,126	41,000	14,638	337	135,613	5,936	5,013
Eaton,	1,160	6,692	48,721	23,069	1,211	150.174	13,367	7,202
Genesee,	1,527	14,934	50,407	72,271	2,805	295,742	30,224	16,551
Hillsdale,	658	20,899	108,683	82,620	5,952	340,121	67,318	12,478
Houghton,								
Huron,								
Ingham,	277	12,981	59,790	28,229	343	144,080	13,213	8,620
Ionia,	1,057	7,312	57,304	23,823	866	117.759	20,386	5,596
Jackson,	2,980	26,478	160,115	132,263	2,324	356.309	36 612	27,355
Kalamazoo,	5,006	5,834	101,812	91,328	3,972	191,027	40,461	10,718
Kent,	2,817	12,044	74,129	22,005	830	181,215	13,740	8,141
Lapeer,	456	7,848	42,638	33,269	1,391	125,983	19,713	6,849
Lenawee,	2,006	38.693	178,042	173,399	6,430	515.437	132.949	35,383
Livingston,	1,496	44,157	100,312	89,686	2,145	308,215	32,105	24,602
Macomb,	2,210	21,003	59,910	101,057	9,551	256.818	52,442	17,717
Mackinac,		20	4,455		300	1,200		96
Marquette,								
Mason,								
Midland,			750	128		600		50
Montcalm,		1,075	3,590	912		5.580		199
Monroe,	3,230	20,774	78,122	57,098	8,341	260,469	42,494	19,000
Newaygo,		883	2,380			1,825		162
Oakland,	7,065	78,004	212,508	299,590	24,472	877,356	221,152	52,134
Oceana,								
Ontonagon,								
Ottawa,	55	553	9,308	1,166	219	30,935	2,100	1,507
Saginaw,	180	999	6,635	2,406	45	14,575	1,720	1,084
Sanilac,	35	503	4,246	2,177		18,415		1,332
Schoolcraft,								
Shiawassee,	259	6,284	26,475	21,733	1,071	110,823	16,400	7,136
St. Clair,	1,107	4,974	24,553	17.631	2,163	135.715	9.940	8,068
St. Joseph,	3.390	16,415	101,534	68,184	3,924	270.513	26,717	12,719
Tuscola,		20	1,040	317		1,170	150	77
Van Buren,	969	2,433	50,041	15.994	2,940	83.704	10.085	3,567
Washtenaw,	6,209	43,492	130.047	235,845	15,008	589 964	117,562	38,669
Wayne,	7,089	23.680	137,277	95.822	11,371	433,879	63 519	42,357
Total,	70,501	476,811	2,333,020	2,007,698	$150,522	7,056,478	1,112,646	424,070

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RECAPITULATION.—CONTINUED.

Clover Seed, Bushels of—	Maple Sugar, Pounds of—	Value of home-made Manufactures.	FLOURING MILLS.					
			Number of—	Power used. Water—	Power used. Steam—	Capital invested in real and personal estate, in the business—	Annual Product. Barrels Flour made—	Annual Product. Value of—
97	91,970	$4,767	3	3		$17,000 00	4,600	$19,600
21	94,493	5,565	2	2		6,800 00	4,200	16,200
87	51,043	5,262	5	5		52,000 00	37,000	141,000
189	207,584	14,343	5	4	1	47,300 00	32,800	102,580
706	39,796	*6,941						
300	107,500	7,467	5	5		21,000 00	8,700	26,400
	2,000							
32	125,024	7,761	2	2		7,000 00	7,000	33,000
31	210,282	7,443	4	4		14,000 00	15,280	39,500
360	162,266	9,919	7	7		63,300 00	24,427	94,308
605	170,161	17,518	8	6	2	79,600 00	27,580	120,110
238	166,204	9,150	4	3	1	27,000 00	5,250	20,857
77	118,537	*7,215						
656	400	18,603	16	13	3	145,500 00	82,800	309,650
369	79,770	5,031	10	8	2	77,500 00	46,000	175,600
148	91,447	8,931	6	6		31,000 00	20,544	78,844
96	60,533	10,257	7	6	1	†55,000 00	10,400	51,000
2,571	152,916	25,874	17	15	2	236,500 00	57,233	335,065
1,112	15,840	21,751	11	11		64,500 00	26,775	108,500
414	67,779	*35,409						
	1,100							
		253						
281	26,168	9,577	2	2		86,500 00	20,075	93,318
		20						
3,128	63,097	33,595	27	27		210,500 00	69,066	225,372
1	42,365	1,266						
4	10,475	418						
	7,255	693	1	1		2,000 00	800	4,000
110	61,157	8,927	5	5		31,000 00	11,700	36,400
	1,100	1,113	2	1	1	8,000 00	37,000	25,500
758	18,595	9,565	12	11	1	142,500 00	52,292	235,027
	3,200	142	1	1		1,500 00	not stated	2,000
1	63,875	7,355	1	1		10,000 00	3,000	12,000
3,824	63,578	25,293	22	20	2	218,500 00	127,890	553,100
365	48,912	16,208	13	11	2	101,150 00	50,262	263,623
16,647	2,426,087	341,239	193	180	18	$1,746,050 00	784,684	$3,031,976

*The balance of the county imperfectly reported.
†Invested in flour and saw mills.

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RECAPITULATION.—CONTINUED.

COUNTIES.	SAW MILLS.					
	Number of	Power used.		Capital invested in real and personal estate in the business.	Annual Products.	
		Water.	Steam.		Feet of Lumber sawed	Value of—
Allegan,	22	19	3	$64,600 00	12,895,000	$76,700
Barry,	17	14	3	22,875 00	5 620,000	29,300
Berrien,	24	22	2	43,360 00	7,790,000	50,000
Branch,	21	17	4	45,700 00	6,220,000	39,265
Calhoun,						
Cass,	11	10	1	13,800 00	2,332,000	12,990
Chippewa,	3	3		6,200 00	850,000	8,500
Clinton,	6	6		10,000 00	1,530,000	9,010
Eaton,	18	16	2	25,250 00	3,600,000	21,820
Genesee,	5	5		15,700 00	5,200,000	38,725
Hillsdale,	24	19	5	32,100 00	6,335,000	40,495
Houghton,						
Huron,						
Ingham,*	12	10	2	14,100 00	3,610,000	22,660
Ionia,						
Jackson,	15	13	2	20,700 00	2,480,000	16,960
Kalamazoo,	13	11	2	21,000 00	5,200,000	35,465
Kent,	18	18		40,100 00	11,425,000	55,475
Lapeer,	13	11	2	*	5,400,000	35,100
Lenawee,	22	14	8	38,600 00	7,740,000	38,950
Livingston,	7	4	3	11,500 00	3,227,000	21,430
Macomb,						
Mackinac,	15	10	5	152,500 00	20,250,000	109,550
Marquette,						
Mason,	1		1	15,000 00	3,000,000	16,500
Midland,						
Montcalm,	6	6		27,000 00	6,000 000	26,000
Monroe,	11	8	3	27,300 00	4,820.000	32,830
Newaygo,	3	3		23,700 00	6,500 000	31,550
Oakland,	10	6	2	13,000 00	3,080.000	22,780
Oceana,	4	2	2	26,600 00	6,100,000	32,000
Ontonagon,						
Ottawa,	24	11	13	144,030 00	49,320,000	307,480
Saginaw,	8	3	5	72,100 00	6,075,000	54,850
Sanilac,	10	7	3	58,900 00	6,725,000	53,775
Schoolcraft,						
Shiawassee,	7	6	1	10,500 00	1.500,000	9,990
St. Clair,	32	11	21	229 000 00	34,450,000	316 800
St. Joseph,	20	19	1	25,750 00	5.590.000	37,695
Tuscola.	3	3		17,000 00	1,055.000	8,600
Van Buren,	12	10	2	20.500 00	4,660,000	27,000
Washtenaw,	24	19	5	44 600 00	6,145.000	43,228
Wayne,	44	15	31	356,671 00	43,528.500	538,325
Total,	485	351	134	$1,688,186 00	310,157,500	$2,221,798

*Merged with flour mills.

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RECAPITULATION.—CONTINUED.

AGGREGATE OF ALL KINDS OF MANUFACTURES, MILLS INCLUDED.				ESTIMATED VALUE OF REAL AND PERSONAL ESTATE.	
Capital invested in real and personal estate in the business.	Hands Employed. Males.	Females.	Value of Annual Products.	By Assessors.	By Assistant Marshals.
$113,000 00	129	2	$155,780 00	$674,328 00	$1,348 616 00
33,075 00	63		65,200 00	369,590 00	492.786 00
144,760 00	187½		325,566 00	832,454 00	2,497.362 00
141,550 00	140		229,095 00	750,781 00	1,989.196 00
				1,582,485 00	3,878.402 00
41,100 00	43		49,725 00	826,486 00	826.486 00
647,960 00	822		395,460 00	150,312 00	150.312 00
21,175 00	25½	2	58.900 00	529 510 00	529 510 00
58,450 00	83		123,678 00	570.979 00	1,600,000 00
104,525 00	132	1½	181,148 00	744,577 00	Not reported.
122,920 00	142		188,399 00	650,000 00	875,000 00
				Returned with	Tusco'a
51,450 00	52		62,283 00	688,006 00	2 031,251 00
250,475 00	361	20	524,422 00	1,449 198 00	4.037,602 00
186,300 00	189	39	355,714 00	777.906 00	1.036.482 00
149,350 00	215		269.141 00	800,609 00	1 007.537 00
78,650 00	106		126.695 00	Not stated.	Not stated.
473,850 00	539	37	784.856 00	2,277,181 00	2.8-4.723 00
90,850 00	86½		180,240 00	755.917 00	1,133,725 00
				830,465 00	2,491.395 00
176,381 00	422		206,481 00	169,279 00	169,279 00
16,900 00	45		22,200 00		
27,000 00	80		29,100 00	Not stated.	Not stated.
146,160 00	155	1	201,440 00	1,031,701 00	1,031,701 00
27,850 00	109		48.662 00		
250,555 00	286	30	713.056 00	2,280,644 00	5,837,052 00
28,500 00	83		37,700 00		
153,540 00	323		337,548 00	435.876 00	671,178 00
75,665 00	113		65,150 00	318 037 00	397,546 00
66,000 00	90		72,795 00	130 638 00	161,276 00
71,075 00	75		110.474 00	553.954 00	951.948 00
324,125 00	543	6	478.400 00	851.009 00	2.537,151 00
259,045 00	278	8	441.482 00	1,004 510 00	2,379 825 00
20,500 00	29		15.600 00	33,562 00	100 506 00
43,500 00	85		67.300 00	493.820 00	750.099 00
475.070 00	529½	39	1.004,268 00	3.259.261 00	4,484 380 00
1,066 205 00	1.783½	117	2.173,323 00	1 657.363 00	3 803.221 00
$5,965,551 00	8,383½	302½	$10,111,488 00	$27,280,518 00	$52,781,977 00

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